ADAPTATION FUND

REGIONAL PROJECT/PROGRAMME PROPOSAL

PART I: PROJECT/PROGRAMME INFORMATION

Title of Project/Programme:	Improved Resilience of Coastal Communities in Côte d'Ivoire and Ghana
Countries:	Côte d'Ivoire and Ghana
Thematic Focal Area:	Disaster risk reduction and Early warning systems
Type of Implementing Entity:	MIE
Implementing Entity:	United Nations Human Settlements Programme
Executing Entities:	**Ghana:** MESTI (LUSPA); NGO **Côte d'Ivoire:** Ministry of the Environment and Sustainable Development, Ministry of Planning and Development; NGO
Amount of Financing Requested:	US$ 13,986,990

PART I. PROJECT / PROGRAMME BACKGROUND AND CONTEXT

- ***The problem: Coastal West Africa combines high exposure with high vulnerability to cc. And the derived risk is expected to increase***

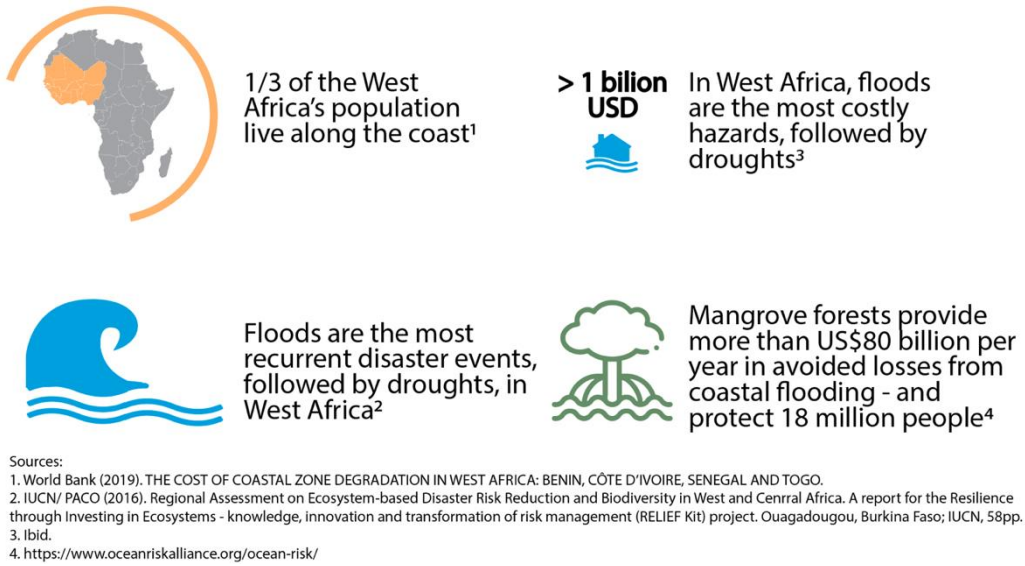
In the last decade, Coastal West Africa has experienced worsening floods, often deadly, damaging infrastructures, homes, livelihoods, and assets[1]. In August 2019 torrential rains wreaked havoc on the coast, threatening humans and ecosystems. Yet, if flooding and aggravated coastal erosion grow more dangerous, climate change hazards go beyond these phenomena. Together with floods and storms, significant warming (between 0.5°C and 0.8°C) was registered between 1970 and 2010 over the region[2]. Significant warming has been registered together with increased evapotranspiration, increased rainfall variability and intensity, accelerated sea level rise of around 1 m per century[3]. The resultant shifts in the hydro-graphical and oceanic conditions due to climate change are likely to exacerbate coastal erosion and sedimentation problems in the West African region[4]. Countries along the coast of West Africa are aligned across an important environmental transition which is likely to be modified by sea level rise and climate change-related events, such as coastal and riverine floods.

The impacts of climate change in the Region, and the losses, can be told under different aspects: number of events, economic losses, human lives. No matter the way: any aspect brings the same message of urgency to intervene to boost climate change adaptation. Flood events in coastal West Africa have been more severe between 2005-2015, with a total of 132 events, with more than 14 million people affected, 2,000 dead and almost 400,000 homeless. Economies were

[1] https://www.wacaprogram.org/article/rising-tide-protecting-vulnerable-coastal-communities-west-africa
[2] Niang, I., O.C. Ruppel, M.A. Abdrabo, A. Essel, C. Lennard, J. Padgham, and P. Urquhart, 2014: Africa. In: *Climate Change 2014: Impacts, Adaptation, and Vulnerability. Part B: Regional Aspects. Contribution of Working Group II to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change* [Barros, V.R., C.B. Field, D.J. Dokken, M.D. Mastrandrea, K.J. Mach, T.E. Bilir, M. Chatterjee, K.L. Ebi, Y.O. Estrada, R.C. Genova, B. Girma, E.S. Kissel, A.N. Levy, S. MacCracken, P.R. Mastrandrea, and L.L. White (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA, pp. 1199-1265.
[3] *Adaptation to Climate Change- Responding to Coastline Change in its human dimensions in West Africa through Integrated Coastal Area Management (ACCC), UNDP, 2007*
[4] Allersman and Tilsmans 1993 – quoted in Africa Environmental Outlook (2000)

affected as it caused US$ 830 million of economic losses (IUCN/PAC, 2016[5]). In addition to flood events (both riverine and pluvial), and sea-level rise, soil erosion and salinization are threatening food security. More precisely, the combination of hazards, exposure and vulnerability, worsen by risk multipliers (such as unsustainable development, poverty and inequality, and environmental degradation), determine climate change impacts such as loss of lives, damaged settlements and infrastructures, ecosystems loss, increased poverty, increased inequalities, and increased food security (Figure 1).

Figure 1: Climate Change and Coastal West Africa



West Africa's coastal areas host about one third of the region's population and generate 56 percent of its GDP (WB, 2019[6]), meaning that any hazard occurring along the coast affects huge -and still growing- numbers of human beings and livelihoods. Together with Eastern Africa, Western Africa hosts the Africa's largest regional populations of people living in extreme poverty. Population that is highly vulnerable to the impacts of climate change has and will continue to increase in Western Africa more than any other African region[7]. From the total estimated 412 million inhabitants in West Africa in 2021[8],the region has over 165 million inhabitants living in extreme poverty. These population, more vulnerable to climate change effects, is growing and projected to reach 210 million inhabitants living in extreme poverty by 2040.

Western Africa has a huge variety of ecosystems and climatic areas (ranging from humid rainforests to hyper-arid desert). Due to such climatic diversity, the 165 million Western Africans living in extreme poverty face threats from coastal heatwaves (exceeding 35°C), to flooding and intense droughts.

The urban growth, especially along the coast, is a driver of vulnerability, as the combination of poverty and of the pace of urbanization promote the spread of settlements which are highly vulnerable and highly exposed to flooding and heat waves. The risks include food insecurity, major loss of life from floods, increasing likelihood of mass migration, and conflicts. According to

[5] IUCN/PACO (2016). Regional Assessment on Ecosystem-based Disaster Risk Reduction and Biodiversity in West and Central Africa. A report for the Resilience through Investing in Ecosystems – knowledge, innovation and transformation of risk management (RELIEF Kit) project. Ouagadougou, Burkina Faso: IUCN. 58pp.
[6] World Bank (2019). THE COST OF COASTAL ZONE DEGRADATION IN WEST AFRICA:
BENIN, CÔTE D'IVOIRE, SENEGAL AND TOGO.
[7] Africa and climate change. Projection and vulnerability and adaptive capacity. Lily Welborn, 2018
[8] World Population Review 2021

Welborn (2018), “pressure on governing institutions at all levels to respond to major climate-related humanitarian crises in the region will intensify through the foreseeable future”[9].

Of course, different dimensions of risk and impacts call for different adaptation strategies. Adaptation to climate change, in general, can be built on the combination of vulnerability reduction and resilience development. While it is impossible to generalize across the varied ecologies of the West African coast, there are some common trends that should be of particular concern to policymakers. These include increasing coastal erosion and loss of wetlands (including mangroves and deltas), negative impacts on fisheries and croplands, and increasing risks to urban settlements areas (Badjek et al. 2014[10]).

The Governments of Ghana and Côte d’Ivoire have requested UN-Habitat to support coastal (and riverine/ delta) cities and communities to better adapt to climate change. This project proposal aims at responding to this request by addressing the main challenges in these coastal zones: coastal inundation, flooding, drought, salinization, coastal erosion and accelerated sedimentation of the small lagoons, and livelihoods’ resilience.

- ***Economic context. Climate change is harming the major engine of economic prosperity of the Region***

The Abidjan-Lagos corridor is one of these megaregions, with a fast-growing urban population of over 30 million. Many experts[11] consider this coastal urban corridor to be the engine of West Africa’s regional economy. Economic growth disparities do exist among the countries of the region. Some countries are experiencing higher economic growth while others are expected to decline. Despite this urbanization, rural development plays a key role as agriculture is still the cornerstone of rural economies in West Africa. Agriculture accounts for 65% of employment and 35% of gross domestic product (GDP)[12]. Marine artisanal fishing is also a major contributor to this GDP. Still, poverty is higher in rural areas where most of the population, nearly 80% of the region, depends on subsistence agriculture and fishing. Nowadays, these activities are generating fewer jobs due to how badly they are impacted by climate change and unsustainable practices. This explains why rural areas are diversifying and highlights the importance of its interaction with urban settlements as growth continues. Another major socioeconomic challenge in West Africa is the high unemployment rate. After declining from 4.2% in 2010, to 3.7%in 2015, the region’s average rate of unemployment shot up to 5.2% in 2018. Youth unemployment is generally much higher than adult unemployment.

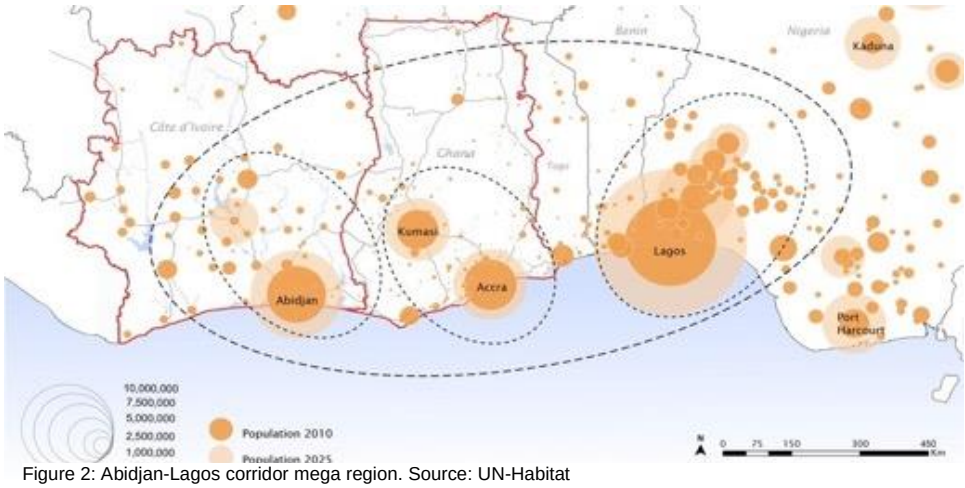


Figure 2: Abidjan-Lagos corridor mega region. Source: UN-Habitat

A focus on Côte d’Ivoire. Findings of the Living Standards Monitoring Survey carried out by the World Bank in 2015 indicate that the recent economic upturn has brought the poverty rate back

[9] Africa and climate change. Projection and vulnerability and adaptive capacity. Lily Welborn, 2018
[10] Badjeck, M.C., Bohn, B., and Sommerville, M. (2014) Climate Change and Water Resources in West Africa: Coastal Biophysical and Institutional Analysis. USAID.
[11] https://www.uneca.org/sites/default/files/PublicationFiles/int_progr_ri_inceptionecowaseng.pdf
[12] West Africa Economic outlook, African Development Bank Group, 2019

down to 46 %[13]. Despite recent efforts, Côte d'Ivoire remains one of the countries with the highest gender inequality rates in the world, a high rate of 36% of youth unemployment and inequal distributions of benefits across the region with low integration of women into the economy. Poverty rate is still high with more than 45% of the population living under the poverty threshold. In addition, climate change is also challenging the sustainable and equal development of Côte d'Ivoire by impacting more directly the vulnerable groups.

Côte d'Ivoire plays a key role in the West African region as it functions as transit trade for neighbouring, landlocked countries. The country is the largest economy in the West African Economic and Monetary Union and has a relatively high income per capita with a favourable GDP growth rate since 2012 reaching 7.4% in 2018.[14] Nevertheless, GDP growth has gradually declined from 10.1% in 2012, but is still estimated to remain above 7%. Despite good economic performance, around a quarter of the working population remains unemployed. Based on estimates by the World Bank, data shows an unemployment rate of 2.4% in 2019.[15]

The country is the fourth-largest exporter of goods, in general, in sub-Saharan Africa. Indeed, agricultural sector remains the country's prime employer and foreign exchange earner, and it is key to poverty reduction in the rural areas. Cacao farming has contributed to 15% of GDP and about 38% of exports[16]. However, the price paid for expanding cultivated areas has led to destruction of massive forests land in the country. Secondly, agriculture is not sufficiently diversified and rural households are not adequately combining agricultural and non-agricultural activities to boost their incomes. Regarding the services sector, it contributed 3.4% to growth in 2018, remaining a main driver of economy. Industry sector such as agri-food industry, construction and public works sector contributed by 1.5%. The coastline is the principal economic resource of Côte d'Ivoire. The diverse habitats that characterize the littoral constitute an ecologic asset for the country due to its economic, cultural, and touristic value. The principal activities in the coastal area include forestry, plantations, factories, tourism, and fishing.[17] The fisheries and aquaculture sector contribute about 3.2% of the agricultural GDP, its contribution to the total GDP is 0,8%, providing employment especially among vulnerable groups. With regards to food security, fish is the primary source of animal protein, and the sector produces 30% of locally consumed fish (annual consumption is estimated at 275,000 tonnes).[18]

A focus on Ghana. Ghana has taken major steps towards economic development. As stated by the Climate Change Policy: "Ghana has moved from a Low Income to a Lower Middle-Income country (as defined by the World Bank) and is both high-growth and energy-hungry".[19] To give a sense of scale, within the ECOWAS region, its economy is the second largest,[20] and on 2011 the country was one of the six fastest growing economies in the world.[21]. However, an important remark is how employment growth has not kept pace with economic prosperity.[22]

Based on the latest ECOWAS Convergence Report in 2016 Ghana faced a moderate GDP growth of 3.5%. Shares of GDP are 19.1%, 24.2% and 56.5%, for primary, secondary, and tertiary sectors, respectively.[23] This distribution, as well as stronger growth reported for industry and services, demonstrate a shift from an agriculture-based economy to services oriented. Climate

[13] http://www.worldbank.org/en/country/cotedivoire/overview
[14] African Development Bank Group Portal, https://www.afdb.org/en/countries/west-africa/cote-d'ivoire/
[15] World Bank Data Portal http://www.worldbank.org/en/country/cotedivoire/overview
[16] Ibid
[17] African Development Bank Group Portal, https://www.afdb.org/en/countries/west-africa/cote-d'ivoire/
[18] Fisheries Committee for the West Central Gulf of Guinea - https://fcwc-fish.org/uncategorized/cote-d-ivoire
[19] Ministry of Environment, Science, Technology and Innovation. 2012. Ghana National Climate Change Policy.
[20] https://countryeconomy.com/countries/groups/economic-community-west-african-states
[21] Alagidede,Paul, Baah-Boateng, William, Nketia-Amponsah,Edward .2013The Ghanaian Economy: An Overview.
[22] Ibid
[23] ECOWAS. 2016. Convergence Report.

change plays a key role given that higher temperatures, stronger storms, reduced rain, and sea level rise, highly impact natural resources communities rely on. Despite this, employment data shows how the primary sector is still a main provider of livelihoods, accounting for 30.4% in 2018.[24] This demonstrates the relevance traditional livelihoods still have in Ghanaian workforce structure. On this regard, latest data shows growth values of 2.5% and 5.7% for agriculture and fishing, respectively. This sector has also a structural role in terms of food security, for example fishing highly contributes to protein intake of the population and therefore is fundamental for adequate nutrition. Its demand keeps increasing, leaving a production deficit of 702,004 tonnes a year. Fish production includes marine, inland, and aquaculture processes.

- ***Social Context***

According to the World population prospects of the United Nations Department of Economic and Social Affairs, West Africa's total population is estimated at 381 million people as of 2018[25]. The region has been experiencing intensive urbanization for more than fifty years. This urbanization has affected the region's largest towns and small urban centres mostly in coastal countries. Indeed, a large percentage of West Africa's urban population lives in coastal cities. The population concentrated in coastal urban areas, could double by 2030 and double again by 2050. In Lagos only, the number of inhabitants could almost reach 90 million by 2100, making it the largest city in the world by then[26]. The 2010 UN-Habitat State of the World Cities report identified "megaregions" and "urban corridors" as new urban forms that could be "one of the most significant developments—and problems—in the way people live and economies grow in the next 50 years".

A focus on Côte d'Ivoire. Based on the World Bank data from 2018, Côte d'Ivoire has reached a total population of around 25 million people in 2018.[27] The Ivorian coastline hosts most of the country's population and a significant part of its economy. Indeed, coastal areas host 30% of the Ivorian population and shelter nearly 80% of the country's economic activities.[28] There is a clear higher concentration in the main city, Abidjan, which exceeded 4 million inhabitants in 2010 making it the second most populous city in West Africa after Lagos.[29] Indeed, Abidjan is subject to accelerated urbanization giving it a cosmopolitan character. This exceptional demographic growth is due to strong natural growth as well as to significant immigration. The city not only welcomes migrants from other regions of the country, but also from its neighbouring countries. According to the World Bank's Migration and Remittances Factbook (2016), Côte d'Ivoire was one of the top ten immigration countries of middle-income countries in 2013.[30] The migrant population tends to reside in rural areas.

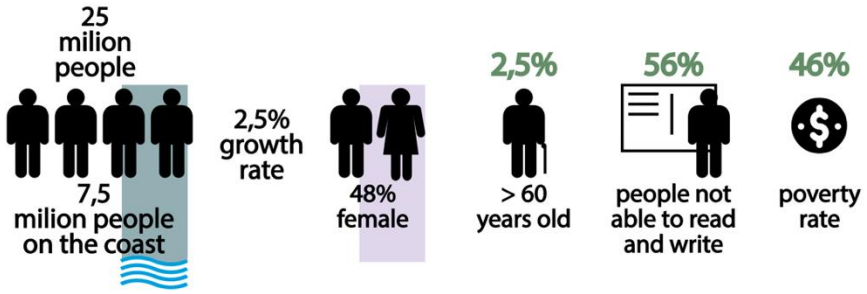


Figure 3: Côte d'Ivoire's socio-economic profile in brief. Source: World Bank Data Portal 2014.

[24] World Bank Data Portal. https://data.worldbank.org/country/ghana.
[25] "World Population prospects – Population division". population.un.org. United Nations Department of Economic and Social Affairs, Population Division. Retrieved November 9, 2019.
[26] http://www.visualcapitalist.com/animated-map-worlds-populous-cities-2100/
[27] World Bank Data Portal http://www.worldbank.org/en/country/cotedivoire/overview
[28] World Bank Data Portal http://www.worldbank.org/en/country/cotedivoire/overview
[29] Comment bénéficier du dividende démographique ? La démographie au centre des trajectoires de développement dans les pays de l'UEMOA, ainsi qu'en Guinée, au Ghana, en Mauritanie et au Nigéria», l'Agence Française de Développement (AFD), 2011.
[30] World Bank's Migration and Remittances factbook, World Bank Group, 2016

A focus on Ghana. Nearly half of the national population live in the coastal belt, which is considered one of the two areas most impacted by climate change.[31] Even if there is not up to date data on this metric, it is well known how this trend continues and even intensifies due to migration from other regions, as well as natural population growth.

Gender-wise, female-male proportion is close to 50%. Other relevant parameters defining social structure are ethnicity and immigration. Ghana nationals, who accounted up to 97.5% of the population in 2010, are divided in more than 8 ethnic groups. Interestingly, as the low percentage of immigrants shows, Ghana has gone from being a major immigration destination in the West African sub-region, to a low immigrant country.[32]

Regarding social welfare, for health services, it has been identified how Ghanaians are using them more since access has improved both geographically and financially.[33] However, indications demonstrate how inequality is still growing as benefits from economic growth and poverty reduction are not equally distributed across the territory, women and men, and different economic status.[34] This is especially significant in rural areas, since its poverty gap against urban areas has widened. As it will be discussed in section III, climate change is another source of such inequalities as its impacts perpetuate vulnerability.

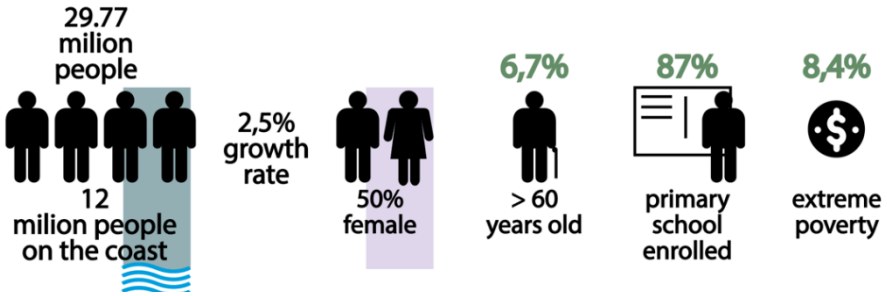


Figure 4: Ghana's socio-economic profile in brief. Source: Ghana Statistical Services. 2013. 2010 Population and Housing census; World Bank Data Portal. https://data.worldbank.org/country/ghana

- ***Gender Context and vulnerable groups.***

Women are amongst the most vulnerable to the impact of climate change hazards due to cultural and social arrangements that shapes and affect their access to service and limited opportunities, which makes them more exposed and vulnerable, leading to more hazards and risks. Climate change aggravated the currently disadvantage patterns. Even though women are highly vulnerable to effects of climate change, the role of women and vulnerable groups in climate change context and natural resources management are still very limited. This results from the social, economic and political barriers and inequality that impede the active participation of women and vulnerable groups in adaptation and mitigation measures against climate change.

Differently from gender, poverty is both a driver and a consequence of disasters, as described by UNDRR: "Socio-economic inequality is likely to continue to increase and with it disaster risk for those countries, communities, households and businesses that have only limited opportunities to manage their risks and strengthen their resilience".[35] This inequality perpetuates as impoverished people are more likely to be settled in hazard-prone areas, having less services, and less coping mechanisms. In general, research has shown how the poor are the most vulnerable to disasters

[31] Ministry of Environment, Science, Technology and Innovation. 2015. Third National Communication to UNFCCC.
[32] Ghana Statistical Services. 2013. 2010 Population and Housing census.
[33] The World Bank, author. 2012. A Health Sector in Transition to Universal Coverage in Ghana.
[34] Ministry of Gender, Children and Social Protection. 2015. Ghana National Social Protection Policy.
[35] Prevention Web: https://www.preventionweb.net/risk/poverty-inequality

and climate change. Poverty needs to be understood as multi-dimensional. It includes not only economic poverty, but also exclusion, illiteracy, discrimination, and limited opportunities. On the one hand, when these components pre-exist, communities are less likely to have sustainable means of living, which makes them more exposed and vulnerable, leading to more hazards and risks. On the other hand, once impacted by a hazard these communities suffer great loss and have very little capacity to adjust. Higher mortality, livelihoods loss, and damage of housing, services, and infrastructure increase the inequality gap. Additionally, women and youth are particularly prone to poverty. Between ages 25 and 34, women are 69 percent more likely to live in poverty than men of the same age36, due to their limited capacity to assets and decent employment opportunities. According to the African Development Bank (AfDB) Gender Equality Index, Côte d'Ivoire ranked 0,409 and Ghana ranked 0,517 showing still a long way to reach equality.

A gender and vulnerable groups baseline assessment was conducted as part of the project's formulation. Further information that summarizes this work is provided in Annex 5. This assessment was primarily conducted in conjunction with the rapid vulnerability assessment, the findings of which are presented below and in Annex 2.

- ***Environmental context***

West Africa has a total land area of 6,140,000 km^2, or approximately one-fifth of Africa. The land consists of contrasting kinds of physical environment, among which we find forests, savannas, mountainous areas, flat lands, riverine areas, and sandy soil. Its coastline is also a major ecosystem accounting for over 10,000 kilometres which extend from Mauritania to Benin.

In particular, Côte d'Ivoire is the transition zone between the humid equatorial climate and the dry tropical climate. Due to the two north-south climate zones, Côte d'Ivoire is separated into two vegetation zones: forest in the south and savannah up north. The forest covers the entire southern part of the country, but its area has decreased significantly in recent decades partly due to excessive exploitation. National Parks and Strict Nature Reserves cover 1.7 million hectares.[37] The country has an east-west coastline of 566km that encompasses a variety of coastal habitats including coastal lagoons, estuaries, mangroves, swamps and humid zones. The most characteristic coastal habitats are the lagoon systems separated from the sea by a littoral bar, formed and maintained by waves and currents. The lagoon system is parallel to the Gulf of Guinea, it is nearly 300 km and covers a total surface area of around 1,200 km2. It consists of three distinct lagoons: The Grand-Lahou, the Ebrié lagoon, and the Aby lagoon. On the other hand, Ghana is divided into several regions: Low Plains, Ashanti Uplands, the Volta Basin, and the High Plains. These Low Plains run parallel to the coastline and can also be divided into sub-regions: the Coastal Savanna, the Accra Ho-Keta Plain and the Akan Lowlands.[38] As a coastal resilience project, our proposal focuses on this Coastal Savanna sub-region. The Coastal Savanna zone "consists of a coastline strand of vegetation along the seashore, mangrove vegetation (mostly degraded) associated with lagoons and coastal estuaries, and inland vegetation primarily of scrub, grasses, and scattered trees with relatively poor soils".[39] Mangroves can function as a primary storm surge barrier. On the other hand, rising sea levels, erosion from extreme weather and increased storm surge represent a significant and growing threat to mangroves related to climate change. The degraded mangroves have affected livelihoods (due to the capacity of mangrove to provide fishery and wood, and also as potential areas to attract eco-tourism), and reduced the water systems´ benefits for coastal protection, flood buffering, and

[36] https://www.americanprogress.org/issues/women/reports/2020/08/03/488536/basic-facts-women-poverty/
[37] United Nations Environment Programme, Côte d'Ivoire Post-Conflict Environmental Assessment, 2015
[38] USAID. 2011. Ghana climate change vulnerability and adaptation assessment.
[39] Ibid

stabilizing substrates composed of fine sediments, among other ecological benefits (estimates indicate that 60 percent of the mangroves have been lost around Abidjan).The Coastal Savanna sub-region includes the Volta Delta which has “fanned outward over time, developing sandbars and smaller rivers, and forming numerous large lagoons”.[40]

Overall, in the Region, the natural environment supplies the region with a rich natural resource base including soil, forest, rangeland, freshwater, and marine resources. This produces a variety of goods and services which strongly support livelihoods of rural population. This is particularly evident in coastal areas, and even more in estuary systems and fluvio-marine connections, where these resources contribute directly to producing ecological services that are useful or even indispensable to the coastal societies.[41] In both Côte d’Ivoire and Ghana, the services and goods that coastal ecosystems provide have a structural role in economic development.

Ecosystems in Coastal West Africa are on one hand one of the assets that countries have to face climate change (for example, mangrove systems can mitigate the effects of floods and limit soil erosion, fisheries can compensate the negative impact of cc-induced drought on food security, vegetation in general cab regulate microclimate and provide colling during heat-waves, …), on the other hand are being harmed by climate-change itself and by anthropogenic actions.

Coastal areas and deltas consist of sediments which are mainly supplied from upstream catchments by rivers. The conservation of this coastal environment is under stake as it is increasingly pressured by multiple threats like climate change and human activities (among these, urbanization and land-use change). Impacts on natural resources and thus population well-being is compromising the long-term development of the region. Natural habitats and resources in the coastal area are hindered by severe degradation, pollution, overexploitation, and poor governance. Coupled with climate change, these are risking the subsistence of coastal ecosystems. Efforts have been put to protect these ecosystems, (for example, in Ghana there are 16 official wildlife reserves which cover around 5.3% of the national land surface). However, countries in the region face big challenges that threaten these environments.

- ***Institutional context***

If on one hand there is lack of alignment between national adaptation priorities within the region[42], it is positive to note that institutions to coordinate and align dialogues exist. Thus, a set of intergovernmental organizations in West Africa have been established based on ecosystem boundaries (GCLME, CCLME), historical language and monetary relationships (UEMOA), regional trade liberalization (ECOWAS), and specific environmental challenges that expand beyond the region alone (Abidjan Convention). These institutions can play the crucial role of hubs for regional coordination and collaboration on coastal management, by creating dialogues, setting priorities, coordinating polices and coordination, and common action[43].

In particular, the Abidjan Convention (The Convention on Cooperation in the Protection, Management and Development of the Marine and Coastal Environment of the Atlantic Coast of the West, Central and Southern Africa Region) covers a geographic area comprises of 22 countries, 19 of which have already ratified it. It was ratified in 1984. The Abidjan Convention is engaged in coordinating coastal policy and information across West Africa. It constitutes a unique institutional referential framework for all initiatives linked to the protection and conservation of the marine and coastal environment along Africa`s Atlantic seaboard, and to the sustainable

[40] Ibid
[41] West African Coastal Areas Challenges, Coastal Ecosystems Group of the Commission on Ecosystem Management, IUCN, 2014
[42] USAID 2014, Coastal Biophysical and Institutional Analysis
[43] Ibid

development of the area`s resources. With the support of UNEP and in coordination with the GCLME, each member of the convention developed a National State of the Coast Report.[41]

A focus on *Côte d'Ivoire and Ghana*. Coastal and marine issues are priorities within the climate change considerations across West African countries. Yet, despite the prioritization of coastal issues across West African countries, only six of the countries (the Gambia, Guinea, Guinea-Bissau, Nigeria, and Senegal) had begun undertaking adaptation actions[44]. Among national priorities presented by Côte d'Ivoire and Ghana for adaptation to climate change, "agriculture" and "freshwater" are in common, while "Coastal protection" is present among Ghana's priorities but not by Côte d'Ivoire. Similarly. "health" is one of the adaptation-priorities presented by the national strategy for Côte d'Ivoire, but not for Ghana. Given the highly transboundary nature of drivers and risks, as well as the similarity of structural vulnerabilities, lack of alignment in term of priority and actions needs to be addressed.

- ***Observed (and future) trends, Hazards and Impacts of Climate Change***

As presented in section 1.1., West Africa is generally regarded as area particularly sensitive to climate change, with significant warming (between 0.5°C and 0.8°C) already registered between 1970 and 2010 over the region.[45] Based on the models developed by IPCC experts, the following changes are expected in the West Africa sub-region: **temperature rise from 3°C to 6°C** by the end of the century and **reduced (from 20 to 35%) and irregular rainfall**, combined with a possible delay in the beginning of the rainy season. [46]

Hazards: The temperature rise and the variability of rainfalls trigger hazards. Based on the IPCC terminology, hazards can be considered both physical events (such as floods, heatwaves,…) and trends (such as drought, salinization, …)[47]. Coastal West Africa in mainly affected by: i) **sea-level rise between 40 to 80 cm**, which is likely to be higher locally depending on the significance of the tide, the strength of the wind or ocean swells triggered by **storms** off the coast[48]; ii) **Coastal erosion**, whose effects are already perceptible, and ocean acidification; iii) a **higher frequency of extreme weather events (heat waves, rainstorms, violent wind**s); iv) coastal (including the major lagoons) and riverine **flooding in the coastal environment**; v) **salinisation, which affects agriculture** and the quality of potable water along the coastline; vi) reduced flow and drying up of rivers[4950].

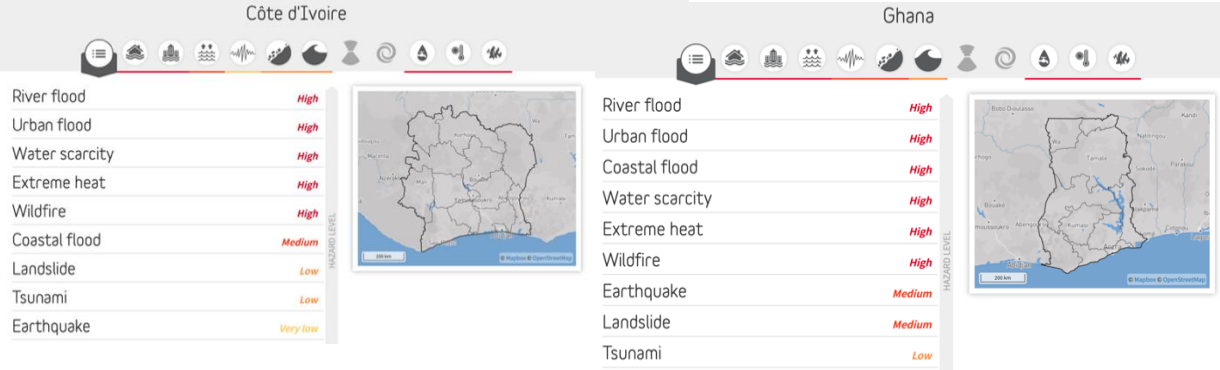
Sea level rise presents significant regional variability in sea-level trends around Africa. There is wide agreement around the idea that coastal erosion is expected to increase dramatically as a

[44] USAID 2014, Coastal Biophysical and Institutional Analysis
[45] Adaptation to Climate Change- Responding to Coastline Change in its human dimensions in West Africa through Integrated Coastal Area Management (ACCC), 2007, UNDP
[46] http://www.prcmarine.org/en/climate-change-west-africa-coastline
[47] **Field**, C.B., V.R. Barros, K.J. Mach, M.D. Mastrandrea, M. van Aalst, W.N. Adger, D.J. Arent, J. Barnett, R. Betts, T.E. Bilir, J. Birkmann, J. Carmin, D.D. Chadee, A.J. Challinor, M. Chatterjee, W. Cramer, D.J. Davidson, Y.O. Estrada, J.-P. Gattuso, Y. Hijioka, O. Hoegh-Guldberg, H.Q. Huang, G.E. Insarov, R.N. Jones, R.S. Kovats, P. Romero-Lankao, J.N. Larsen, I.J. Losada, J.A. Marengo, R.F. McLean, L.O. Mearns, R. Mechler, J.F. Morton, I. Niang, T. Oki, J.M. Olwoch, M. Opondo, E.S. Poloczanska, H.-O. Pörtner, M.H. Redsteer, A. Reisinger, A. Revi, D.N. Schmidt, M.R. Shaw, W. Solecki, D.A. Stone, J.M.R. Stone, K.M. Strzepek, A.G. Suarez, P. Tschakert, R. Valentini, S. Vicuña, A. Villamizar, K.E. Vincent, R. Warren, L.L. White, T.J. Wilbanks, P.P. Wong, and G.W. Yohe, 2014: Technical summary. In: Climate Change 2014: Impacts, Adaptation, and Vulnerability. Part A: Global and Sectoral Aspects. Contribution of Working Group II to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change [Field, C.B., V.R. Barros, D.J. Dokken, K.J. Mach, M.D. Mastrandrea, T.E. Bilir, M. Chatterjee, K.L. Ebi, Y.O. Estrada, R.C. Genova, B. Girma, E.S. Kissel, A.N. Levy, S. MacCracken, P.R. Mastrandrea, and L.L. White (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA, pp. 35-94.
[48] http://www.prcmarine.org/en/climate-change-west-africa-coastline
[49] IPCC 2019, Special report on climate change and land**d**
[50] UNFCCC, 2020. Climate Change Is an Increasing Threat to Africa. https://unfccc.int/news/climate-change-is-an-increasing-threat-to-africa

result of sea level rise and, in some areas, in combination with increasing intensity of cyclones (IPCC, 2019[51]). Sea level rise, combined with scarcity of water in river channels, have been instrumental in the intrusion of highly saline seawater inland, posing a threat to coastal areas and an emerging challenge to land managers and policymakers. Seawater intrusion is generally caused by (i) increased tidal activity, storm surges, cyclones and sea storms due to changing climate, (ii) heavy groundwater extraction or land-use changes as a result of changes in precipitation, and droughts/floods, (iii) coastal erosion as a result of destruction of mangrove forests and wetlands, (iv) sea level rise contaminating nearby freshwater aquifers as a result of subsurface intrusion (IPCC, 2019[52]). Such degradation takes the form of high soil salinity.

In particular, by overlaying information from the WB Climate Change Knowledge Portal ("Country profiles")[5354], from the data base of UNEP[55], and from other sources[56], it emerges that Côte d'Ivoire and Ghana, respectively, suffer mainly from floods (both urban floods and riverine/coastal floods), extreme heat and water scarcity (see fig. 5 below). This information relates to physical events, while from the trend side there is scientific evidence that sea-level rise and salinization also represents major problems[57].

Figure 5: Source of the figure: https://thinkhazard.org/en/report/



Impacts: Severe floods are challenging communities of coastal West Africa and disrupting the ecosystems. These effects are called "impacts". More specifically, IPCC defines climate change impacts as "Effects on natural and human systems. Impacts generally refer to effects on lives, livelihoods, health, ecosystems, economies, societies, cultures, services, and infrastructure due to the interaction of climate changes or hazardous climate events occurring within a specific time period and the vulnerability of an exposed society or system". [58]

In Coastal West Africa, impacts are being experienced in terms of **urban health,** as the lagoon system is becoming more prone to flooding putting villages at risk and bringing serious

[51] IPCC 2019, Special report on climate change and land
[52] IPCC 2019, Special report on climate change and land
[53] https://climateknowledgeportal.worldbank.org/country/cote-divoire/vulnerability
[54] https://climateknowledgeportal.worldbank.org/sites/default/files/2018-10/wb_gfdrr_climate_change_country_profile_for_GHA.pdf
[55] https://preview.grid.unep.ch
[56] https://thinkhazard.org/en/report/
[57] IPCC 2019, Special report on climate change and land
[58] Field, C.B., V.R. Barros, K.J. Mach, M.D. Mastrandrea, M. van Aalst, W.N. Adger, D.J. Arent, J. Barnett, R. Betts, T.E. Bilir, J. Birkmann, J. Carmin, D.D. Chadee, A.J. Challinor, M. Chatterjee, W. Cramer, D.J. Davidson, Y.O. Estrada, J.-P. Gattuso, Y. Hijioka, O. Hoegh-Guldberg, H.Q. Huang, G.E. Insarov, R.N. Jones, R.S. Kovats, P. Romero-Lankao, J.N. Larsen, I.J. Losada, J.A. Marengo, R.F. McLean, L.O. Mearns, R. Mechler, J.F. Morton, I. Niang, T. Oki, J.M. Olwoch, M. Opondo, E.S. Poloczanska, H.-O. Pörtner, M.H. Redsteer, A. Reisinger, A. Revi, D.N. Schmidt, M.R. Shaw, W. Solecki, D.A. Stone, J.M.R. Stone, K.M. Strzepek, A.G. Suarez, P. Tschakert, R. Valentini, S. Vicuña, A. Villamizar, K.E. Vincent, R. Warren, L.L. White, T.J. Wilbanks, P.P. Wong, and G.W. Yohe, 2014: Technical summary. In: *Climate Change 2014: Impacts, Adaptation, and Vulnerability. Part A: Global and Sectoral Aspects. Contribution of Working Group II to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change* [Field, C.B., V.R. Barros, D.J. Dokken, K.J. Mach, M.D. Mastrandrea, T.E. Bilir, M. Chatterjee, K.L. Ebi, Y.O. Estrada, R.C. Genova, B. Girma, E.S. Kissel, A.N. Levy, S. MacCracken, P.R. Mastrandrea, and L.L. White (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA, pp. 35-94.

environmental health and sanitation challenges related to water access and sewage systems. Other crucial impacts are occurring and are expected in terms of **conflicts**: rainfall variability and the drying up of rivers can lead to a shortage of freshwaters and potential conflicting interests.

From both an **economic and food security** point of view, it is key to remember that the primary sector is still highly relevant in the region, both in Ghana and Côte d'Ivoire. Primary sector is still a main provider of livelihoods in Ghana, accounting for 30.4% of jobs in 2018. On this regard, latest data shows growth values of 2.5% and 5.7% for agriculture and fishing, respectively. This sector has also a structural role in terms of food security, for example fishing highly contributes to protein intake of the population and therefore is fundamental for adequate nutrition. Its demand keeps increasing, leaving a production deficit of 702,004 tonnes a year. For this reason, salinization and sea-level rise and floods-caused soil erosion, (which harm the **mangroves and compromise their fishery provisioning)** are alarming. The sea-level rise will affect coastal environments. In the face of this development, failure for the mangrove to move gradually upstream owing to a lack of space or the construction of coastal infrastructures will result in even more serious degradation. **This in turn will negatively impact the reproduction of fisheries** (fishes, shrimps and oysters provided by mangroves), wildlife (birds and manatees), carbon storage capacities and the coastline[59].Other impacts are, of course, loss of lives and damages to infrastructures and settlements when hazards occur.

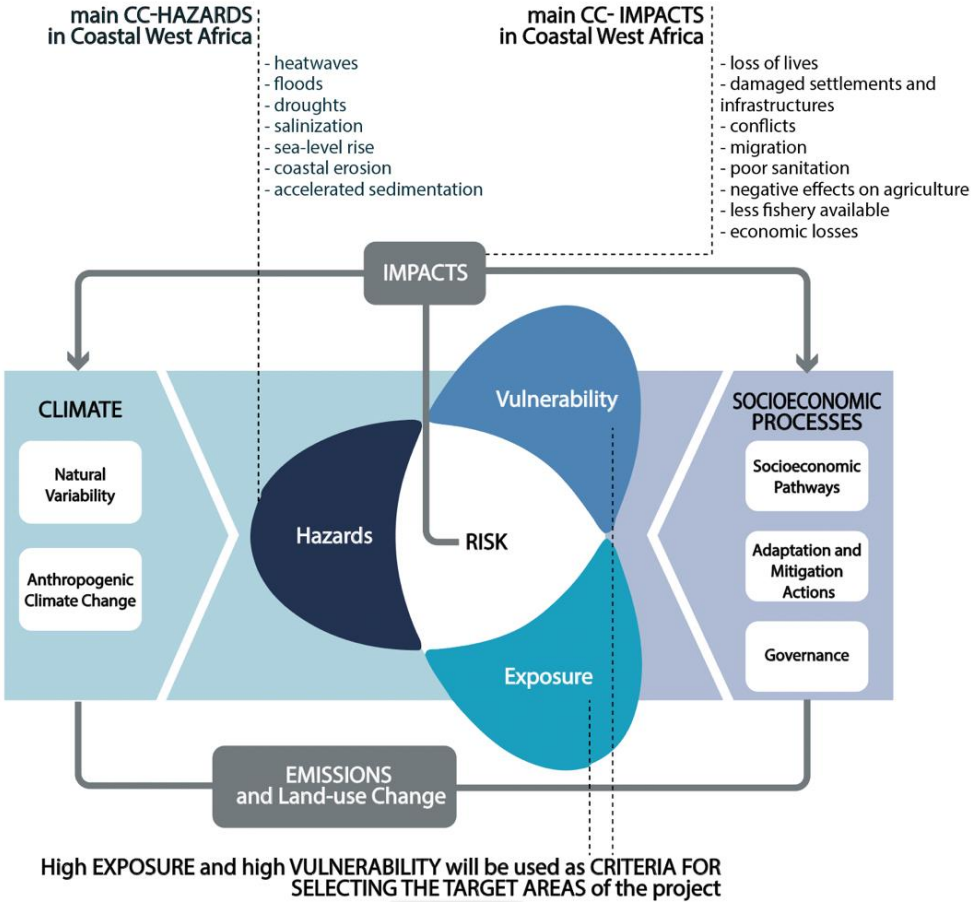


Figure 6 Climate change risks and impacts, adapted from Field et a l60

[59] http://www.prcmarine.org/en/climate-change-west-africa-coastline

[60]Field, C.B., V.R. Barros, K.J. Mach, M.D. Mastrandrea, M. van Aalst, W.N. Adger, D.J. Arent, J. Barnett, R. Betts, T.E. Bilir, J. Birkmann, J. Carmin, D.D. Chadee, A.J. Challinor, M. Chatterjee, W. Cramer, D.J. Davidson, Y.O. Estrada, J.-P. Gattuso, Y. Hijioka, O. Hoegh-Guldberg, H.Q. Huang, G.E. Insarov, R.N. Jones, R.S. Kovats, P. Romero-Lankao, J.N. Larsen, I.J. Losada, J.A. Marengo, R.F. McLean, L.O. Mearns, R. Mechler, J.F. Morton, I. Niang, T. Oki, J.M. Olwoch, M. Opondo, E.S. Poloczanska, H.-O. Pörtner, M.H. Redsteer, A. Reisinger, A. Revi, D.N. Schmidt, M.R. Shaw, W. Solecki, D.A. Stone, J.M.R. Stone, K.M. Strzepek, A.G. Suarez, P. Tschakert, R. Valentini, S. Vicuña, A. Villamizar, K.E. Vincent, R. Warren, L.L. White, T.J. Wilbanks, P.P. Wong, and G.W. Yohe, 2014: Technical summary. In: Climate Change 2014: Impacts, Adaptation, and Vulnerability. Part A: Global and Sectoral Aspects. Contribution of Working Group II to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change [Field, C.B., V.R. Barros, D.J. Dokken, K.J. Mach, M.D. Mastrandrea, T.E. Bilir, M. Chatterjee, K.L. Ebi, Y.O. Estrada, R.C. Genova, B. Girma, E.S.

- ***Focus of the proposal (target areas)***

  - *Regional level*

The coastal stretch of Ghana and Côte d'Ivoire belongs to the **coastal system** that runs from Côte d'Ivoire to Benin, with a total length of about 1300 km (Figure 7). The coastal system is characterized by a fast west to east longs shore **sediment transport** with a capacity up to 1.5 Mm^3/ year[61]. **Flooding and coastal erosion in West Africa threaten communities, livelihoods, and the economy**. About 56% of West Africa's GDP is generated in coastal provinces, where one-third of the population resides[62], which means that the exposure of this area and its communities to climate change impacts, also negatively impact the well-being of the inland areas of West Africa's countries. In sum, from a land degradation point of view, low-lying coastal areas are particularly exposed to the nexus of climate change and increasing concentration of people (IPCC, 2019[63]). The level of **exposure** of settlements to hazards is particularly worrying. Rapid and often unplanned urbanization brings to sprawling of settlements in unsafe flood-prone areas. On top of the high exposure of people, infrastructures and livelihoods, the level of **vulnerability** of human, social, and built capital is extremely high. The ongoing model of development **has devastated the natural landscape that once served as a buffer for erosion and flooding**. In addition, risk is not "equitably" distributed: these dynamics mainly affect the poorest and most marginalized, and will intensify due to climate change.

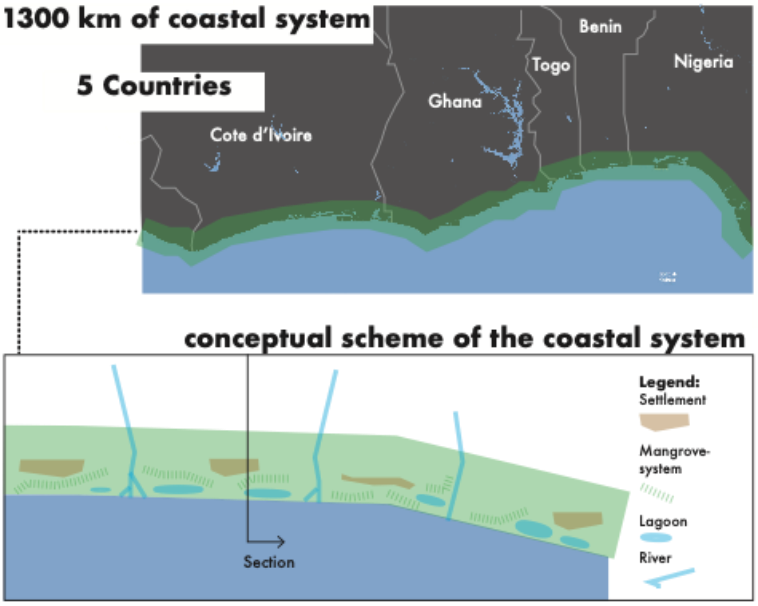


Figure 7: A common physical system

"While countries have started to contain erosion and flooding, there is an urgent need for partners to mobilize financing through coordinated regional action", the World Bank said[64].

The amount of common features characterizing the West Africa Coastal Systems, on one hand determines common levels and drivers of climate change risk, but on the other hand, calls for common and "transferable" solutions.

  - *A focus on Côte d'Ivoire and Ghana.*

Both Côte d'Ivoire and Ghana have large coastal strips, 566 km and 540 km respectively. Similarly to other Coastal West African countries, the coastal morphology Ghana and Côte d'Ivoire is characterized by a sandy barrier and beach, which protects a system of freshwater/ brackish lagoons, low-lying planes and estuaries. The abundance of **sandy barriers and coastal lagoons along the coast** of the two countries indicates morphodynamical behaviour typical for an ebb

Kissel, A.N. Levy, S. MacCracken, P.R. Mastrandrea, and L.L. White (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA, pp. 35-94.

[61]Giardino, A. et al., A quantitative assessment of human interventions and climate change on the West African sediment budget, Ocean and Coastal Management (2017), https://doi.org/10.1016/j.ocecoaman.2017.11.008

[62] Waka project

[63] IPCC 2019, Special report on climate change and land

[64] WAKA.

tidal delta system. This is characterized by cyclic patterns of erosion and accretion at the coast. This cyclic event is called a morphological cycle and can span decades.

Both in Ghana and Côte d'Ivoire communities are built on the coastal barriers, or just land inwards at the banks of the lagoons/ low lying plains. A characteristic coastal habitat found here are the **lagoon systems** separated from the sea by a littoral bar. These lagoons **serve as natural water storage facilities** and form a buffer for both excessive rainfall and wave overtopping. During the monsoon season between May and July, and **exacerbated by climate change** during the last decades, rainfall increases **causing rivers to overtop their banks and strong winds cause extremely high waves often overtopping the beaches and sandy barrier along the coast**. This leads to flooding and has already led to major damage to assets, houses and infrastructure, and critical ecosystems such as beaches and mangroves as well as many farmlands have been devastated. Of course, because of climate change, which triggers sea-level rise and more extreme rain events, **floods are getting more frequent and severe**.

Coastal erosion, mainly a natural phenomenon exacerbated by climate change through increased sea-level rise, accelerated by anthropogenic action and unplanned urbanization, also increased flooding from high waves overtopping the sandy barriers and beaches along the coasts. In many places the loss or degradation of mangroves that normally serve as a natural barrier between sea and land, are a major cause for increased erosion and subsequent flooding inland and underground salt-water intrusion.

In particular, in Ghana (Keta lagoons) there is constant flooding of the area after heavy rains and also from the inflow of Kplikpa and Aka rivers into the lagoon. **Keta Lagoon** is the largest of the over 90 lagoons that cover the 550 km stretch of the coastline of Ghana. This lagoon is 126.13 km in length. It is located in the eastern coast of Ghana and separated from the Gulf of Guinea[4] by a narrow strip of sandbar. This open salty water is surrounded by flood plains and mangrove swamps. Together they form the Keta Lagoon Ramsar site which covers 1200 km^2 [65]. Similarly to Ghana, in Côte d'Ivoire, the Ebrie Laggon is a 130km long lagoon-. Abidjan and towns such as Grand Bassam, Bingerville, Jacqueville, Attécoubé, and Tiagba lie on the lagoon.

- *Targeted communities*

For the two counties, two main target areas were selected for intervention, and they correspond to the areas where the major lagoons lie, hence where frequent floods occur. More specifically, the selection of the targeted communities was done according to a prioritization process using Vulnerability Risks Assessments[66] and a multi-criteria

Figure 8: Target areas in both countries

[65] https://en.wikipedia.org/wiki/Keta_Lagoon
[66] [66] Boateng, Isaac.Jayson-Quashigah, Philip. 2016.Mapping Vulnerability and Risk of Ghana's Coastline to Sea Level Rise.

methodology to ensure evidence-based selection. Each of these was weighted according to its relevance and was provided with measurable indicators that ensured an objective evaluation. The prioritization process was conducted using a matrix where the different parameters were given a score for each of the areas to be prioritized. Ultimately, the prioritization was done by ranking the areas from the highest to the lowest values. For more information on target areas selection refer to Annex 2.

Communities in Côte d'Ivoire

Due to increased poverty among inland rural communities, an increased migration of the population towards the coastal zone has risen to the **Greater Abidjan** region, concentrating 30% of the national population. Urban growth and expansion led to increased pressure on coastal resources and high levels of exposure and vulnerability to climate change hazards, specifically on the area along the coast between Grand-Lahou district in the west and Adiake district in the east. Hence, within the Greater Abidjan region, the departments of **Grand-Bassam** and **Jacqueville** were selected for the intervention area.

Figure 9: Target departments and communities in Côte d'Ivoire

Grand-Bassam is located in the south-east of Côte d'Ivoire, in the administrative region of Sud-Comoe, 43 kilometre east of Abidjan. The whole area is also surrounded by a rich natural environment and ecosystems; indeed, degraded mangrove can be found along the lagoon and the Comoé River. **Jacqueville** is located 60 km west of Abidjan, in the administrative region of Grand-Ponts. Apart from Jacqueville and Grand-Jack, all the communities are directly located along the lagoon, some of them fully surrounded by waterbodies. Jacqueville commune and Grand-Jack are the most populated communities located directly on the seaside. Selected communities and population can be found in Table 1.

Table 1. Target communities' populations. Cote d'Ivore.

	Departments		Communities	Population	Female %	Youth %
Cote d'Ivore	Grand Bassam	1	Quartier France	2,394	45	27
		2	Azuretti	1,397	52	25
		3	Vitre 2	1,412	45	15
		4	Mondoukou	1,436	48	33
	Jacqueville	5	Grand Jack	3,404	45	12
		6	Tiémien	541	42	78

		7	Tefredji	3,726	50	6
		8	Taboth	899	55	18
		9	Attoutou B	1,616	45	42
		10	Koko	782	47	18
		TOTAL		17,607		

Exposure and vulnerability to climate hazards in Gran Bassam and Jacqueville communities.

To worsen the impact of hazards (mainly coastal erosion and floods), mangrove deforestation (increasing due to harvesting for fuel) upgrades the exposure to floods, as the natural mitigating barrier is gradually disappearing. This has damaged the coastal lagoons ecosystems, reduced the fishery productivity, increased flood risk, water pollution and shoreline erosion. Community livelihoods in Jacqueville are highly vulnerable due to their dependence of fishery production from mangroves, due to poor drainage and degraded lagoons worsening the effect of heavy rains, and due to poor capacities to cope with climate change. Furthermore, insufficiency of funds and a lack of planning regulations are exacerbating the challenges.

During consultations, communities have proposed several adaptations measures:

- Provision of barriers to reduce coastal erosion and coastal retreat
- Provision of barriers for flooding
- Construction of drainage systems
- Providing alternative livelihoods and jobs creation
- Mangrove restoration
- Awareness raising for the preservation of natural environment
- Support for sanitation and waste management

Communities in Ghana

Within the coastal strip, the project will implement its approach in Greater Accra and the Volta region in Anloga/ Keta. Volta and Greater Accra regions have been identified with the highest population density decrease rates linked to unplanned growth and development patterns. This implies encroachment of natural systems like mangroves. In Volta region, deforestation and loss of mangroves are particularly alarming, and in Greater Accra 22% of their wetlands have been lost. Within this, **Ada West**, **Ada East**, and **Anloga/ Keta** districts were selected.

Figure 10: Target departments and communities in Ghana

Ada West and **Ada East** communities are located in a low-lying coastal plain (lowest points between 1 to 3.5 meters below sea level). These communities are close to the Volta estuary on

a narrow land strip in between the sea and the Keta lagoon. The area is marshy due to the underlying sandy-clay geological formation. **The Anloga/ Keta** wetlands have been designated as a Ramsar site since it provides sanctuaries for several birds including migratory and resident ones, especially waterfowls. All the communities are located on the edges of the beach and are enclosed by the sea and the system of lagoons. Selected communities and population can be found in Table 2.

Table 2. Target communities' populations. Ghana.

	District		Community	Population	Female %	Youth %
Ghana	Ada West	1.	Aklabanya	5,208	51	35
		2.	Wokumagbe	1,664	53	51
		3.	Goi	3,734	53	34
	Ada East	4.	Kewunor/Azizanya	2,889	50	52
	Anloga/ Keta	5.	Agorkedzi/Atiteti	2,499	53	53
		6.	Agbledomi	4,966	51	55
		7.	Dzita	3,011	53	51
		8.	Tegbi	12,419	54	54
		9.	Woe	10,862	51	49
		10.	Anloga	23,199	53	58
		11.	Whuti	2,365	53	46
		TOTAL		72,816		

Exposure and vulnerability to climate hazards in Ada West, Ada East and Anloga/ Keta communities.

While coastal erosion and *flooding* are challenging traditional ways of living in the communities, exposure is increasing due to degradation of natural mitigation systems (mangroves) and poor planning (that does not take into account flood prone areas). Vulnerability of communities is exacerbated by their economic dependence on agriculture (being harmed by increased climate change-induced salinization). *Sea level rise and shoreline retreat* is getting the sea line closer to the communities and fishing devices such as canoes and other related activities (trading, markets, and workshops) along these beaches are decreasing. This is due to the limited space and damaged infrastructure resulting from flooding events and storm surges. Though there is high willingness to protect the community, people's capacity to cope with these challenges is very limited. As of today, they are filling up the wetlands, lagoon areas with plastic rubbers aiming at preventing floods.

The communities have proposed several adaptation measures:

1. Increase lagoons' storage capacity
2. Provision of alternative employment or livelihoods
3. Provision of barriers for flooding and erosion
4. Obtaining an appropriate site for dumping refuse
5. Construction of drainage systems
6. Provision of portable drinking water
7. Awareness raising

Project / Programme Objectives (approach, goal and objectives)

According to IPCC, climate change adaptation is about reducing exposure and vulnerability[67].

"Adaptation is place- and context-specific"[68], and there is no single strategy for reducing risks across all settings. In addition, adaptation planning deals not only with "natural assets", but societal values, objectives, and risk perceptions. For this reason, to be effectively enhanced, it

[67] IPCC: IPCC (2014), Climate change 2014, Impacts, Adaptation and Vulnerability -Top findings from the working group II AR5 Summary for policy makers

[68] IPCC: IPCC (2014), Climate change 2014, Impacts, Adaptation and Vulnerability -Top findings from the working group II AR5 Summary for policy makers

needs to be addressed by parallel and complementary actions across institutional levels and scales, from communities to governments. Thus, through dealing with complexity, adaptation is complex itself, in terms of identifying the proper scale for action, the proper stakeholders and the proper strategies.

Emerging conceptual and empirical advances in the understanding of adaptation to climate change, is very much related with understanding implication of the **spatial scales**[69]. To this regard, the sets of measures to put in place climate change adaptation, tackle aspects of exposure and vulnerability that occurs or can be managed at different scales. For example, while institutional, governance issues can be better addressed at higher scales (regional level and national level)[70], on site implementation of physical intervention calls for a local scale[71]. Adaptation is not only based on geographical contexts, but also on social and political conditions and drivers. Scale affects the fundamental conceptualisation of equity and justice. Scale determines the construction and the implementation of adaptation policies, with actions and plans at the national level significantly affected by local institutional issues[72].

The project aims at an improved climate change adaptation of urban settlements on Coastal West Africa, through reducing exposure and vulnerability to climate change-related hazards, and improving resilience of economies and communities. The objective is pursued through an adaptation pathway designed to increase resilience and decrease both exposure and vulnerability. Based on an analysis of hazards and impacts (section 1.7), the main objectives were identified in order to tackle complementary factors belonging to three different spatial scales (namely: regional, national, and community level).

More specifically, in alignment with the AF results framework, in particular **Outcome 1 (**Reduced exposure to climate-related hazards and threats), **Outcome 2** (Strengthened institutional capacity to reduce risks associated with climate-induced socioeconomic and environmental losses), **Outcome 3** (Strengthened awareness and ownership of adaptation and climate risk reduction processes at local level) and, **Outcome 4** (Increased adaptive capacity within relevant development sector services and infrastructure assets), **Outcome 5** (Increased ecosystem resilience in response to climate change and variability- induced stress), **Outcome 6** (Diversified and strengthened livelihoods and sources of income for vulnerable people in targeted areas), **Outcome 7** (Improved policies and regulations that promote and enforce resilience measures) and **Outcome 8** (Support the development and diffusion of innovative adaptation practices, tools and technologies) the project has two objectives, namely:

1. Objective 1: To promote regional coordination, inter-country experience sharing and cross-fertilisation regarding the adaptation to transboundary climate-related natural hazards and disseminate lessons learned for progressively building urban climate resilience in Coastal West Africa.
2. Objective 2: To develop capacities and establish conditions to adapt to the adverse effects of climate change in vulnerable urban contexts in Ghana and Côte d'Ivoire;

Objective 1 represents the regional dimension of the project and will be anchored to the Abidjan Convention. As per the MoU for establishing the collaboration with the Abidjan Convention, the

[69] Adger, W. N., Arnell, N. W., & Tompkins, E. L. (2005). Adapting to climate change: perspectives across scales. *Global Environmental Change*, *15*(2), 75-76.
[70] Adger, W. N., Arnell, N. W., & Tompkins, E. L. (2005). Successful adaptation to climate change across scales. *Global environmental change*, *15*(2), 77-86.
[71] IPCC: IPCC (2014), Climate change 2014, Impacts, Adaptation and Vulnerability -Top findings from the working group II AR5 Summary for policy makers
[72] Adger, W. N., Arnell, N. W., & Tompkins, E. L. (2005). Adapting to climate change: perspectives across scales. Global Environmental Change, 15(2), 75-76.

project will promote regional coordination among key climate-change adaptation issues. In addition, the project will promote inter-country experience sharing and cross-fertilisation, and work as a knowledge platform regarding urban resilience related issues that can be disseminated in the sub-region. One of the key "raison d'être" for establishing this agreement is the need for these countries belonging to the same geographical region to coordinate climate adaptation policies and initiatives and share best practices on how to address common transboundary climate-related natural hazards. This certainly represents a strong added value of the project, whose impacts will also benefit additional countries in Coastal West Africa.

Objective 2 responds to the problem raised in the project background regarding both ongoing and expected hazards in Coastal West Africa, and the exposure and vulnerability of urban settlements (also related to low capacity of local governments in West Africa in identifying and planning actions for effectively adapting to the negative effects triggered by climate change). This is especially true in fast growing small and intermediate cities. In these urban contexts, vulnerable communities are the ones most severely affected by climate change. Under-serviced unplanned settlements are sprawling in an uncontrolled manner and municipal authorities are ill-prepared to face the unwanted consequences of this dynamic process. These range from the increased risk to climate-related natural hazards such as floods, simply due to the vulnerable location of the new settlements, to issues compounding the impact of climate change, such as the lack of solid waste management, or poor techniques applied in housing construction.

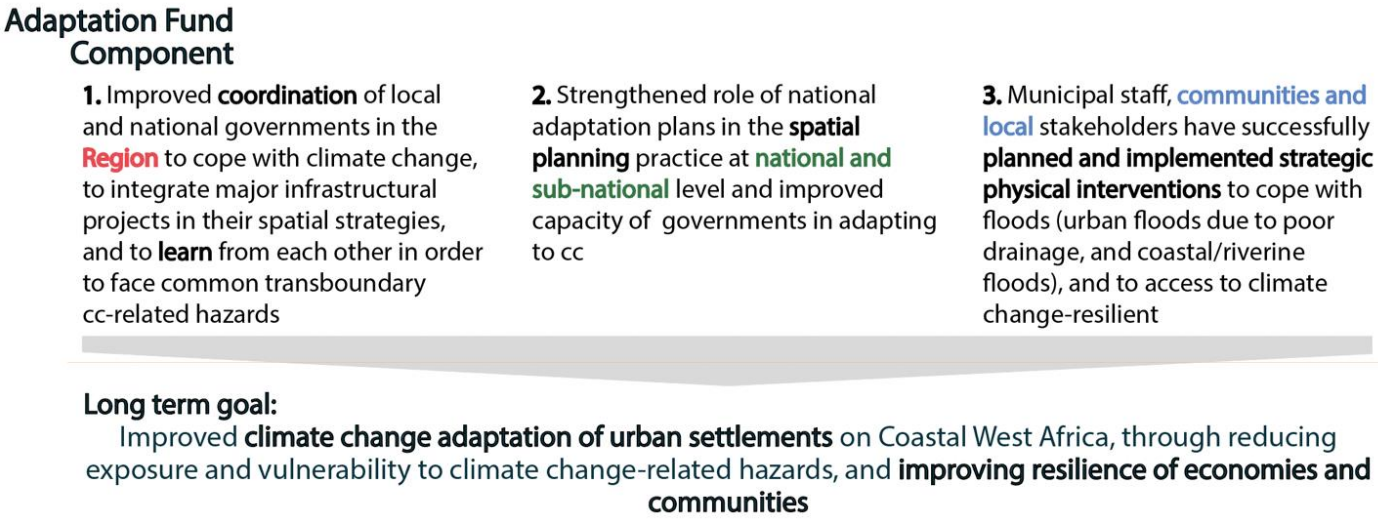
Through Objective 2 national authorities are also targeted. The idea is to take advantage from an improved regional coordination (pursued through objective 1) to prepare coherence and effective spatial development frameworks at sub-national and district/department level, integration climate action in strategies and priority projects, which can prepare the floor for both community plans and local physical intervention, and for the future replication of community plans and local physical intervention within the same frameworks. For this purpose, the project will also allow delivering training activities to both central and local authorities through appropriate institutions and networks and by building appropriate partnerships with on-going initiatives and start laying the foundations for building urban climate resilience and start-up the design of spatial development frameworks in the two targeted countries.

Therefore, there are three Project Components (which will be described in more detail in Part II), the first contributing to Objective 1, and the second two contributing to Objective 2:

1. **Component 1** aims at an **improved coordination** of governments and stakeholders **at Regional and subregional level** to cope with climate change, to integrate major infrastructural projects in their spatial strategies, and to learn from each other in order to face common transboundary cc-related hazards. Inter-country experience sharing, cross-fertilisation and dissemination of lessons learned at the regional level, aligned with the need of a regional project to promote new and innovative solutions to climate change adaptation for urban areas in multiple countries affected by common/transboundary climatic threats, with **AF Outcome 2**: "Strengthened institutional capacity to reduce risks associated with climate- induced socioeconomic and environmental losses", **AF Outcome 3:** "Strengthened awareness and ownership of adaptation and climate risk reduction processes at local level", **AF Outcome 4:** "Increased adaptive capacity within relevant development sector services and infrastructure assets", **AF Outcome 7**: "Improved policies and regulations that promote and enforce resilience measures" and **AF Outcome 8**: "Support the development and diffusion of innovative adaptation practices, tools and technologies".

2. **Component 2** aims at a strengthened role of national adaptation plans in the **spatial planning** practice at **national and sub-national level** and **improved capacity** of governments in adapting to cc. Tools and guidelines development and training delivery at the national level, aligned with **AF Outcome 2:** "Strengthened institutional capacity to reduce risks associated with climate-induced socioeconomic and environmental losses", **AF Outcome 4:** "Increased adaptive capacity within relevant development sector services and infrastructure assets", **AF Outcome 7**: "Improved policies and regulations that promote and enforce resilience measures", and **AF Outcome 8**: "Support the development and diffusion of innovative adaptation practices, tools and technologies".

3. **Component 3** aims at Municipal staff, **communities** and local stakeholders have successfully **planned and implemented strategic physical interventions** to cope with floods (urban floods due to poor drainage, and coastal/riverine floods), and to access to climate change-resilient livelihoods Preparation, implementation and sustainable management of the physical intervention at the community level, aligned with Adaptation Fund (AF) **Outcome 1**: "Reduced exposure to climate-related hazards and threats", **AF Outcome 3**: "Strengthened awareness and ownership of adaptation and climate risk reduction processes at local level", **AF Outcome 4**: "Increased adaptive capacity within relevant development and natural resource sectors", **AF outcome 5**: "Increased ecosystem resilience in response to climate change and variability-induced stress", **AF Outcome 6:** "Diversified and strengthened livelihoods and sources of income for vulnerable people in targeted areas", and **AF Outcome 7**: "Improved policies and regulations that promote and enforce resilience measures".



PART I. CONCEPTUAL FRAMEWORK (SYNTHETIC THEORY OF CHANGE)

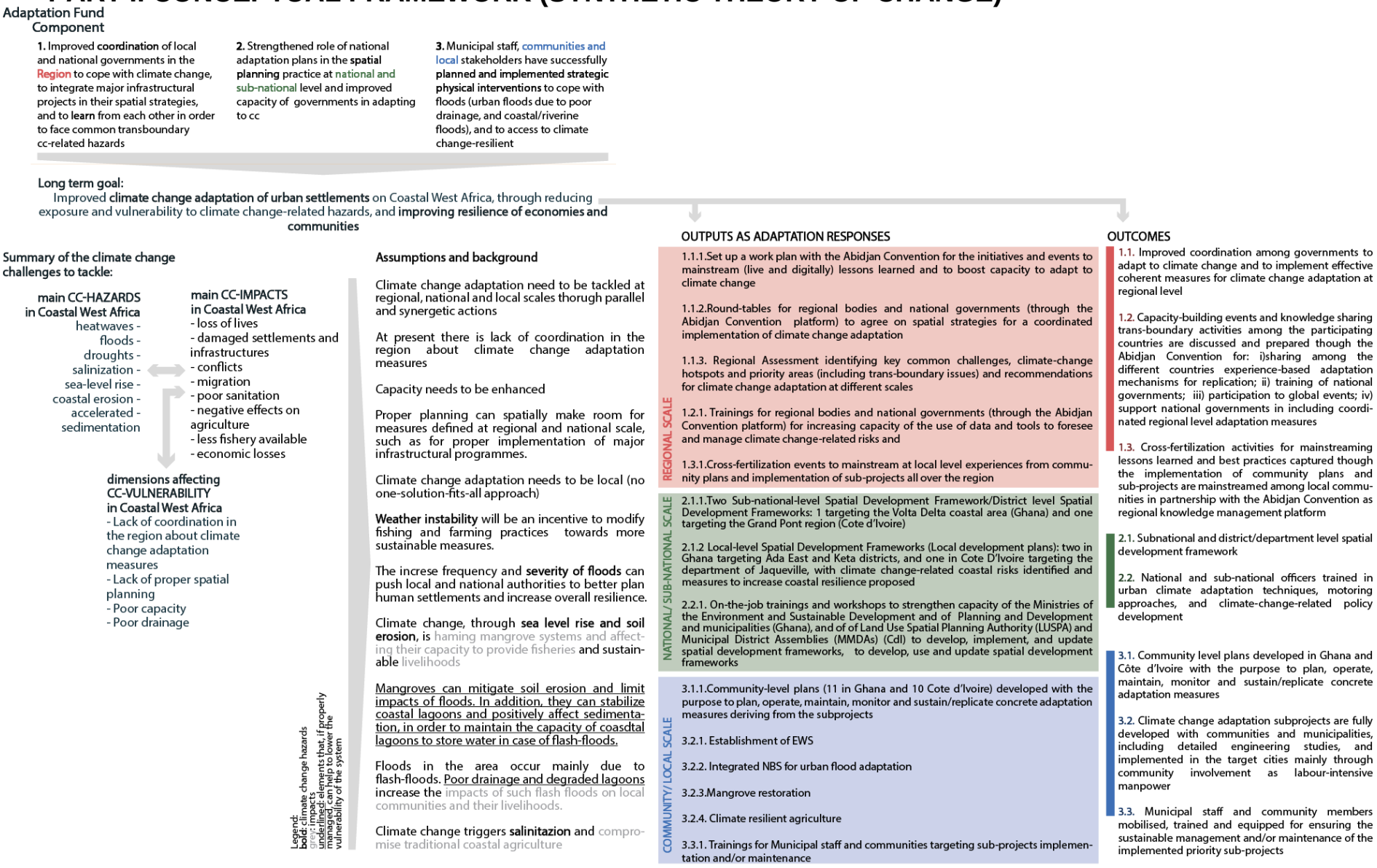


Figure 11: Theory of change of the project

PART I. PROJECT COMPONENTS AND FINANCING

Table 3: Project component and financing

Project/ Programme Components (ToC Ooutcomes)	Expected Outcomes	Expected Outputs	Countries	Amount (US$)
1.Improved coordination of governments and stakeholders at Regional and sub-Regional level to cope with climate change, to integrate major infrastructural projects in their spatial strategies, and to learn from each other in order to face common transboundary cc-related hazards	**1.1 .Improved coordination** among governments to adapt to climate change and to implement effective coherent measures for climate change adaptation at regional level	1.1.1. Set up a work plan with the Abidjan Convention for the initiatives and events to mainstream (live and digitally) lessons learned and to boost capacity to adapt to climate change	Ghana Côte d'Ivoire And other Countries within the Abidjan convention	**81,500**
		1.1.2. Round-tables for regional bodies and national governments (through the Abidjan Convention platform) to agree on spatial strategies for a coordinated implementation of climate change adaptation	Ghana Côte d'Ivoire And other Countries within the Abidjan convention	**103,000**
		1.1.3. Regional Assessment identifying key common challenges, climate-change hotspots and priority areas (including trans-boundary issues) and recommendations for climate change adaptation at different scales	West African Region with stronger focus in Ghana, Côte d'Ivoire and neighbouring countries within the Abidjan Convention	**98,000**
	1.2. Capacity-building events and knowledge sharing trans-boundary activities among the participating **countries** are discussed and prepared though the Abidjan Convention for: i) sharing among the different countries experience-based adaptation mechanisms for replication; ii) training of national governments; iii) participation to global events; iv) support national governments in including coordinated regional level adaptation measures	1.2.1. Trainings for regional bodies and national governments (through the Abidjan Convention platform) for increasing capacity of the use of data and tools to foresee and manage climate change-related risks and	Ghana Côte d'Ivoire And other Countries within the Abidjan Convention	**92,000**
	1.3. Cross-fertilization activities for mainstreaming lessons learned and best practices captured though the implementation of community plans and sub-projects are **mainstreamed among local communities** in partnership with the Abidjan Convention as regional knowledge management platform	1.3.1. Cross-fertilization events to mainstream at local level experiences from community plans and implementation of sub-projects all over the region	Ghana Côte d'Ivoire And other Countries within the Abidjan convention	**158,000**
2.Strengthened role of national adaptation plans in the spatial planning practice at national and sub-national level and improved capacity of governments in adapting to cc	2.1. Subnational and district/department level spatial development framework	2.1.1. Two Sub-national-level Spatial Development Framework/District level Spatial Development Frameworks: 1 targeting the Volta Delta coastal area (Ghana) and one targeting the Grand Pont region (Côte d'Ivoire).	Ghana and Côte d'Ivoire Volta Delta Coastal areas (Ada East, Ada West and Anloga/ Keta areas) + Region de Grand Pont	**874,600**
		2.1.2 Local-level Spatial Development Frameworks (Local development plans): two in Ghana targeting Ada East and Anloga/ Keta districts, and one in Côte d'Ivoire targeting the department of Jacqueville, with climate change-related coastal risks	Ghana and Côte d'Ivoire Ada East and Anloga/ Keta disctricts + Jacqueville	**557,000**

		identified and measures to increase coastal resilience proposed		
	2.2. National and sub-national **officers trained** in urban climate adaptation techniques, motoring approaches, and climate-change-related policy development	2.2.1. On-the-job trainings and workshops to strengthen capacity of the Ministries of the Environment and Sustainable Development and of Planning and Development and municipalities, Department (CdI), and of of Land Use Spatial Planning Authority (LUSPA) and Municipal District Assemblies (MMDAs) (Ghana) to develop, implement, and update spatial development frameworks, to develop, use and update spatial development frameworks	Côte d'Ivoire and Ghana	**293,000**
3.Municipal staff, communities and local stakeholders have successfully planned and implemented priority sub-projects to cope with climate-change related issues, such as sea level rise and floods, and access to climate-resilient livelihoods	**3.1. Community level plans** developed in Ghana and Côte d'Ivoire with the purpose to plan, operate, maintain, monitor and sustain/replicate concrete adaptation measures	3.1.1. Community-level plans (11 in Ghana and 10 Côte d'Ivoire) developed with the purpose to plan, operate, maintain, monitor and sustain/replicate concrete adaptation measures deriving from the subprojects.	Ghana and Côte d'Ivoire	**1,859,360**
	3.2. Climate change adaptation **subprojects** are fully developed with communities and municipalities, including detailed engineering studies, and implemented in the target cities mainly through community involvement as labour-intensive manpower	3.2.1. Establishment of EWS	Ghana and Côte d'Ivoire	**1,533,500**
		3.2.2. Integrated NBS for urban flood adaptation	Ghana and Côte d'Ivoire	**1,464,522**
		3.2.3. Mangrove restoration	Ghana and Côte d'Ivoire	**1,785,339**
		3.2.4. Climate resilient agriculture	Ghana	**2,588,414**
	3.3. Municipal staff and community members mobilised, **trained** and equipped for ensuring the sustainable management and/or maintenance of the implemented priority sub-projects	3.3.1. Trainings for Municipal staff and communities targeting sub-projects implementation and/or maintenance	Ghana and Côte d'Ivoire	**206,000**
		Total components		**11,694,235**
	Sub-total Project Execution Costs (max 9.5 %)			**1,197,000**
	SUB-TOTAL Component + execution fee			**12,891,235**
	Sub-total Project Cycle Management Fee (max 8.5 %)			**1,095,775**
	Amount of Financing Requested			**13,986,990**

- **Project / Project Calendar**

Table 4: Project calendar

Milestones	Expected Dates	Milestones	Expected Dates
Start of Project/Programme Implementation	06 - 2022	Project/Programme Closing	06 - 2026
Mid-term Review (if planned)	06 - 2024	Terminal Evaluation	12 - 2026

PART II: PROJECT / PROGRAMME JUSTIFICATION

PART II. A. PROJECT COMPONENTS

To achieve the overall project objective 'improved climate change adaptation of urban settlements on Coastal West Africa, through reducing exposure and vulnerability to climate change-related hazards, and improving resilience of economies and communities", the projects' 'core' entails a set of 'concrete' adaptation actions (subprojects), using innovative and replicable techniques that aim to enable communities to cope with climate-change related issues, such as sea level rise and floods, and ensure access to climate-resilient livelihoods (component 3, outcome 3.2.).

To ensure local ownership and capacity to 'manage' these 'concrete' adaptation actions (subprojects) and to avoid social tension of proposed project benefits, measures to inclusively plan, operate, maintain and replicate the actions are proposed at the community level under component 3, in terms of community plans (outcome 3.1) and trainings (outcome 3.3.). To better manage urban risks and vulnerabilities, spatial development frameworks and capacity building activities are undertaken under component 2 and cover the subnational and national level. The lessons learned and a better vertical coordination derived from the project are relevant for the Coastal West Africa region as well as areas with a similar context and will therefore be shared in the region (component 1), For detailed maps of target areas and conceptual drawings of concrete interventions, see annex 3. For details of all activities, see budget notes in annex 1.

The specific needs of especially women, youths and ethnic and indigenous groups have been considered and will be considered at all stages of the project. This will be achieved by engaging the representatives of vulnerable groups in community and stakeholder consultations with a community-based approach following the tested and proven 'Planning for Climate Change' principles, where the project will build on existing community groups, like women unions, or form new committees where necessary, and sustain these throughout all stages of the project and through which communities participate in project implementation. This will include monitoring and evaluation to ensure that project outcomes equally benefit women and men, assess the effectiveness of gender sensitive trainings, and measure the efficiency in terms of addressing gender issues.

The objectives of the proposal are in line with national priorities (see section II.E) and Adaptation Fund outcome areas, which resulted in the following three components:

Component 1: Improved coordination of governments and stakeholders at Regional and sub-Regional level to cope with climate change, to integrate major infrastructural projects in their spatial strategies, and to learn from each other in order to face common transboundary cc-related hazards

Why is it needed: In the region, there is a lack of vertical coordination in terms of climate change priorities, as well as in terms of spatial strategies to adapt to climate change. In addition, there is poor understanding on how coastal dynamics, and natural and socio-economic systems interact, and how these interdependencies lead to increased vulnerability to climate change. Scientific data and knowledge are fragmented or not integrated in a systemic way. Capacity also needs to be enhanced among government to build, mainstream and manage such knowledge. There is thus need to invest in a better understanding of the regional, national, and local interdependencies between climate change, and ecosystems and socio-economic dynamics. Linking these with communities' resilience will be paramount. On the other hand, a regional institution that can be the engine of such capacity building, coordination building and experience sharing exists: the Abidjan Convention.

Component 1 will focuses on three outcomes:

- **1.1. Improved coordination** among governments to adapt to climate change and to implement effective coherent measures for climate change adaptation at regional level;

- **1.2. Capacity-building** events and knowledge sharing trans-boundary activities among the participating countries are discussed and prepared though the Abidjan Convention for:
    - i) sharing among the different countries experience-based adaptation mechanisms for replication;
    - ii) training of national governments;
    - iii) participation to global events;
    - iv) support national governments in including coordinated regional level adaptation measures;

- **1.3. Cross-fertilization activities** for mainstreaming lessons learned and best practices captured though the implementation of community plans and sub-projects are mainstreamed among local communities in partnership with the Abidjan Convention as regional knowledge management platform.

Under outcome 1.1. three outputs are comprised. **Outputs 1.1.1. and 1.1.2** aim at boosting regional coordination through: the set up a **work plan with the Abidjan Convention** for the initiatives and events to mainstream (live and digitally) lessons learned and to boost capacity to adapt to climate change (output 1.1.1); and **Round-tables for regional bodies and national governments** (through the Abidjan Convention platform) to agree on spatial strategies for a coordinated implementation of climate change adaptation (output 1.1.2). More specifically, under Output 1.1.2., eight regional meetings for experience sharing among the participating countries will be organized, two per year, during which on the side steering project committee meetings will take place and annual work plans discussed and approved. The regional roundtables will focus on issues identifying effects (on national and local level dynamics) of ongoing regional level strategies. Also funds mobilization, scaling up, and issues related to gender and to vulnerable groups will be deeply considered. In addition, the region presents common threats and common opportunities: an assessment of risk and possible solution can maximize the effect and effectiveness of locally developed solutions through replication. For this reason, last and third output within outcome 1.1. is a “Regional Assessment identifying key common challenges, climate-change hotspots and priority areas (including trans-boundary issues) and recommendations for climate change adaptation at different scales” (output 1.1.3). One more positive effect of outcome 1.1. will be to avoid negative effects of policies, plans and interventions that implemented in one country could affect neighbouring countries given the transboundary character of climate change adaptation, coastal erosion and sea level rise.

All activities under outputs 1.1.1., 1.1.2, and 1.1.3. will be managed by the Abidjan Convention (supported by and in collaboration with UN-Habitat). These two institutions will play a strong role at the regional level as they embody credible institutions with complementary roles of sharing experiences, promoting knowledge and delivering trainings. The upcoming formalisation of the relation between these two institutions will facilitate this process. The Abidjan Convention is interested in using the expected results of this project to influence regional policies and strategies.

Outcome 1.2. provides only one **output (1.2.1.): Trainings** for regional bodies and national governments (through the Abidjan Convention platform) for increasing capacity of the use of data and tools to foresee and manage climate change-related risks and impacts. Similarly to outputs under outcome 1.1., this output will open the project beyond Ghana and Côte d’Ivoire and include further Coastal West African countries through inter-country cooperation. For this purpose, the role of the Abidjan Convention will be crucial and thanks to this project direct benefits from the

existence of the Convention will reach national governments involved. The fact that activities occur under the Abidjan Convention's umbrella, will bring in high level expertise from other regions. In particular, some common/harmonised guidelines on urban climate adaptation for Coastal West Africa that can be followed by other member States and positively influence their own policies, legislation and approaches will be drafted and mainstreamed. Eight meetings will be organized at regional level (two per year), and eight meetings will be organized at national level (two per year). The academia will also be involved.

Outcome 1.3. provides only one **output (1.3.1.): Cross-fertilization events** to mainstream at local level experiences from community plans and implementation of sub-projects all over the region. Cross-fertilization activities will focus on best practices regarding the different adopted approaches in the two countries concerned by the project. A range of diverse technical solutions will be extracted from these local experiences, to be systematised and disseminated further. In addition, specific expertise existing in one country can be mobilised and utilised effectively in the other countries, so that mutual learning and synergies can be maximised. Again, as per all outputs under component 1, the fact that activities occur under the Abidjan Convention's umbrella, will trigger the systematization of an international network of centres of excellence, based on local experience. Cross-fertilization events will require the preparation of specific publications on lessons learned and best practices implemented in the target areas that will inform/be useful to the two concerned countries and other countries in Coastal West Africa. The lessons learned will be to be disseminated both through the webpage (see output 1.1.1.) and presented in regional/international events; documenting best practices and lessons learned and making them available through proper knowledge platforms is critical considering that there are currently no appropriate examples of integrated climate adaptation in urban settings in this region.

This component highlights the added value of adopting a regional approach compared to implementing projects in individual countries separately. Thus, while the Abidjan convention exists and represent a tremendous opportunity for coordinated and sound climate change adaptation, many countries involved apply non-aligned climate change adaptation priorities at national and sub-national level. At the same time, another promising opportunity is represented by internationally funded infrastructures and projects (e.g. the WB WACA project) that can really bring solutions to the ground, but if not effectively understood at national level and integrated into lower level planning, the risk of non-integration and loss of potential of the project is high. As well as local experiences. Other expected positive effect of component 1, focus on:

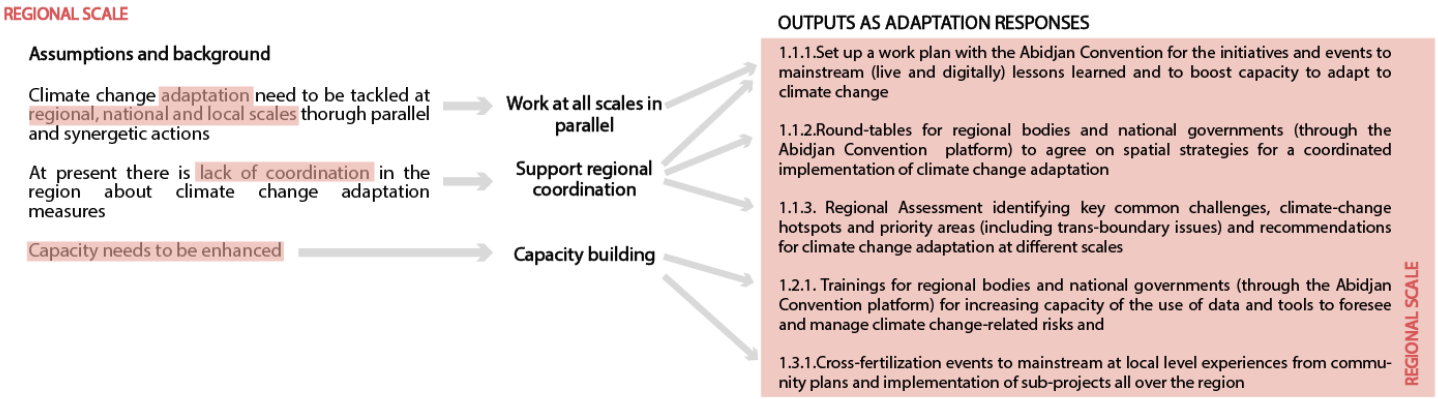
-Promoting and facilitating the coordination, exchange, learning, and south-to-south technical assistance between Ministries, local governments and additional stakeholders with the mandate of addressing climate change through project implementation mechanisms such as the Regional Project Steering Committee (RPSC) and Regional Project Supervision Unit (RPSU) and the regional convening power of the Abidjan Convention.

-Promoting the development of knowledge and technical materials both in English and French, having both Ghana and Cote d' Ivoire as early adopters and champions of climate change adaptation policies, plans and interventions to be shared and replicated in the other ten West African countries.

-Benefitting from the competitive advantages and knowledge complementarities of both Ghana (e.g. spatial planning and environmental planning) and Cote d' Ivoire (e.g. institutional integration and primary sector production) to promote south-to-south learning, collaboration and technical assistance.

Figure 13 presents the rational how the outputs of component 1 represent an adaptation response to the impacts and vulnerabilities characterizing the specific context (defined in chapter 1). The outputs, of course, derive from the identification of outcomes, which depend on the formulation of the three components and the long-term goal. The linkages between assumptions and background, outputs, outcomes, components and long-term goal, are presents through the Theory of Change model.

Figure 12: How outputs under component 1 respond to the assumptions and background of the ToC of the project



Component 2: Promote climate change resilience through spatial development frameworks

Why is it needed: Sustainable development of the coastal areas in Ghana and Côte d'Ivoire requires both effective spatial planning and governance structures that can ensure the implementation of plans and the development of new economic drivers based on improved awareness of the socio-cultural value and the climate change vulnerability of the natural landscape. This requires both the development of long-term strategies, and its translation to territorial plans, land-use plans, adaptation plans, guidelines, and regulations as well as the development of educational and awareness programs at the community level. The capacity development of national and local officials in relation to adaptation to climate change and specifically to coastal erosion represents a related challenge as part of the individuals that form the governance structures providing concrete solutions for these issues. This challenge strongly relates to the previous one, as climate-informed spatial plans require scenarios and accurate, evidence-based models for identifying risk areas. Further, functional spatial planning requires the existence of international and state institutions to oversee, steer, and coordinate such a risk informed and planned development.

In line with AF outcome 2 and 7 and Côte d'Ivoire and Ghana National priorities (see section E and Annex 7), component 2 aims to promote climate change resilient coastal development through two outcomes:

- Outcome 2.1. Subnational and district/department level spatial development framework;
- Outcome 2.2. National and sub-national officers trained in urban climate adaptation techniques, motoring approaches, and climate-change-related policy development.

Outcome 2.1. comprises two outputs. **Output 2.1.1: Two Sub-national-level Spatial Development Framework**/District level Spatial Development Frameworks: 1 targeting the Volta Delta coastal area (Ghana) and one targeting the Grand Pont region (Côte d'Ivoire); and **output 2.1.2: Local-level Spatial Development Frameworks** (Local development plans): two in Ghana targeting Ada East and Anloga/ Keta districts, and one in Côte d'Ivoire targeting the department

of Jacqueville, with climate change-related coastal risks identified and measures to increase coastal resilience proposed.

Outcome 2.2. delivers one single output: "**On-the-job trainings** and workshops to **strengthen capacity of the Ministries** of the Environment and Sustainable Development and of Planning and Development and municipalities (Ghana), and of Land Use Spatial Planning Authority (LUSPA) and Municipal District Assemblies (MMDAs) (CdI) to develop, implement, and update spatial development frameworks, to develop, use and update spatial development frame", (**output 2.2.1**).

This component will ensure the long-term sustainable development of coastal areas at sub-national and district/department level. Spatial development frameworks provide a multi-sectorial analysis and diagnosis that aim at identifying main challenges and opportunities through which to develop spatial strategies and action plans. In this process, a comprehensive approach will be pursued in which all 3 dimensions of sustainability are integrated, social, economic, and environmental. This will also include legal and financial studies and recommendations to support the spatial planning output. Topics like land rights or financial opportunities will be crucial to identify feasible concrete interventions, such as the ones to be implemented through component 3. These plans will therefore become a tool through which to orient decision making in the short, medium, and long term.

In addition, given the huge impact climate change has in the countries, mainstreaming climate change and disaster risk will be paramount in the process. The spatial development frameworks will identify risk areas and its adaptation and mitigation capacities, which will help to define suitable areas for growth, environmental protection areas, and non-buildable areas. The objective is building resilience by avoiding risk prone development and leveraging upon identified opportunities and strengths.

Regarding the "on the job trainings", (output 2.2.1), several tools from UN-Habitat will be guiding this process. For example: Local Leadership for Climate Change Action (2011), Developing Local Climate Change Plans (2012), Planning for Climate Change (2014), Integrating Climate Change into City Development Strategies (2015), Guiding Principles for City Climate Action Planning (2015) or International Guidelines on Urban and Territorial Planning (2015). By mainstreaming climate change into territorial planning, this component will support outcome 1 from UN-Habitat's Flagship Programme 3 "Resilient Settlements for the urban poor". This outcome is "Pro-poor climate action is mainstreamed in national and city climate policies, plans and commitments, and into the priorities and strategies of important parts of the global climate action & finance architecture respecting fundamental rights".

Both Ghana and Côte d'Ivoire have developed and approved national planning policies and frameworks that set the priorities of the countries in relation to urban development and climate change adaptation and mitigation. The project takes these documents and an evaluation on exiting gaps, as a baseline to define and execute this component and designated outputs. Therefore, the spatial development frameworks at the sub-national and district / department levels respond to legislative needs and are aligned with national policies. In addition, local strategies and plans, following their development and implementation, will inform the subsequent drafts of the national policies, to ensure that local challenges and priorities are incorporated.

The Sub-national and district / departments plans, deducted from the national frameworks, are the tools that localize and enable the implementation of national policies at the municipal scale. The coordination between the sub-national and district / department scales will be ensured through a participatory process during the elaboration of the plans, and through the creation / strengthening of inter-ministerial and inter-district / department coordination mechanisms. Specific activities such as inter-ministerial meetings, working sessions, expert meetings, and

workshops will be developed during the project to promote the plans endorsement and support by all stakeholders (government, communities, private sector, NGOs, etc.)

To also ensure coordination at the international level, and to facilitate a platform for knowledge sharing and decision-making, a coordination mechanism involving the Ministries of Environment, Ministries of Local Government and Ministries of Public Works from both countries will be supported. This will be done in collaboration with the Abidjan Convention and, where possible, through other relevant international bodies. This coordination mechanism will also be the starting point for a larger regional coastal resilience coordination body that would bring neighbouring countries into common action, including e.g. developing a regional coastal management strategy/ plan.

In Côte d'Ivoire, the target areas are the region of Grand-Ponts for the Regional Spatial Development Framework, and Jacqueville department for the local development scale. In Ghana, the target areas for the sub-national SDF are Ada East, Ada West, and Anloga/ Keta; and for the district level Ada East and Anloga/ Keta. Given the scope of the sub-national SDF in Ghana, a Volta Delta SDF, the final geographical scope of the plan will be defined along with the Land Use Spatial Planning Authority during project implementation.

Finally, the last element for this component is the technical support to be provided by UN-Habitat as agreed with the relevant authorities. This includes support on stakeholders' engagement processes, on alignment with international standards and methodologies, technical assistance, and capacity building.

Figure 14 presents the rational how the outputs of component 2 represent an adaptation response to the impacts and vulnerabilities characterizing the specific context (defined in chapter 1). The outputs, of course, derive from the identification of outcomes, which depend on the formulation of the three components and the long-term goal. The linkages between assumptions and background, outputs, outcomes, components and long-term goal, are presents through the Theory of Change model (Figure 14).

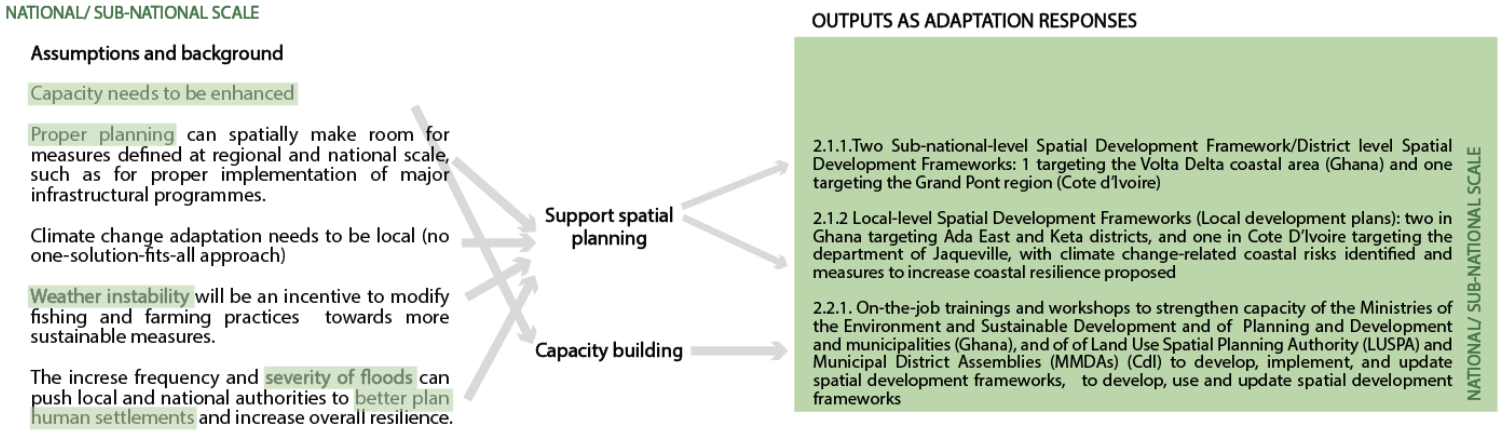


Figure 13: How outputs under component 2 respond to the assumptions and background of the ToC of the project

Component 3: Municipal staff, communities, and local stakeholders have successfully planned and implemented strategic physical interventions to cope with floods (urban floods due to poor drainage and coastal/riverine floods), and to access to climate-change resilient livelihoods

Why is it needed: given the remaining uncertainty and the urgency to adapt to increasing coastal erosion and inundation / flooding risks, there is a direct need to develop a more agile way to identify, design, test, implement and scale-up adaptation measures. This implies the need to

develop a community-informed learning-by-doing environment in which a wide range of fit-for-purpose, low-cost, multi-benefit solutions can be developed, tested and monitored to rapidly find the most cost-effective or socially impactful solutions, using the green principle of building with nature and not against it. This also requires accurately monitoring the effectiveness and impacts of these interventions.

Component 3 is made of **three outcomes: 3.1. Community level plans** developed in Ghana and Côte d'Ivoire with the purpose to plan, operate, maintain, monitor and sustain/replicate concrete adaptation measures; **3.2. Climate change adaptation subprojects** are fully developed with communities and municipalities, including detailed engineering studies, and implemented in the target cities mainly through community involvement as labour-intensive manpower; **3.3. Municipal staff and community members** mobilised, **trained** and equipped for ensuring the sustainable management and/or maintenance of the implemented priority sub-projects.

In line with AF outcome 3 and Côte d'Ivoire and Ghana National priorities (see section E), **outcome 3.1.** aims to strengthen community awareness and capacities to anticipate, adapt and respond to climate- related coastal hazards and threats through its output: **Community-level plans** (11 in Ghana and 10 Côte d'Ivoire) developed with the purpose to plan, operate, maintain, monitor and sustain/replicate concrete adaptation measures deriving from the subprojects **(output 3.1.1)**. In the same way that national planning feeds into district/department level and vice versa, the district/department planning documents will inform and support decision making at community level planning.

This output is required to ensure that interventions are fully in line with communities and vulnerable groups needs and climate change resilience building needs and to ensure concrete interventions under outcome 3.2. will remain operational after the project has concluded. This will be done by fully involving communities in the planning and execution of the proposed interventions (through community resource management approaches). The communities will develop plans to execute these interventions, including management and maintenance arrangements, which will also include waste management plans.

To ensure that inhabitants are aware of the main issues and risks (including environmental and social risks of interventions) in their communities, and to be able to respond to these issues and risks, awareness raising campaigns will be rolled-out and trainings conducted. Special attention will be given to gender and youth regarding challenges from climate change and opportunities for resilience.

Outcome 3.2. entails transformative and catalytic projects as the basis for the implementation of coastal resilience at the community level. The transformative interventions **are subprojects** responding to the combined actions of hazards. Outcome 3.2, with its four subprojects, adopts an area-based approach with a set of interventions addressing local needs will enable a tailored process considering the specific characteristics of each community and building on the local knowledge and traditions. Working on different communities at the same time by implementing the sub-project activities, gathering new lessons learned and continuously adapting to improve the results, the solutions can be transferred across the region. The focus will be on flood mitigation and protection through integrated subprojects adopting nature-based solutions (retention facilities, mangrove restoration, salt-resilient crops, biofilters, green drainage channels, …) and innovative measures for the contexts (such as the adoption of early warning systems, carbon credits, sustainable water and soil managements, …). Among the benefits of developing such transformative interventions, is that they are able to locally rebalance hydrodynamics and the water cycle. Ultimately, these activities will be providing the enabling environment for supporting sustainable livelihoods, under the climate resilient agriculture and under indirect benefits deriving

from mangrove restoration. Ultimately, this outcome will enhance community participation and ownership by creating additional job opportunities, protecting existing ones and shifting those which need to adapt to the new conditions of the environment.

Working simultaneously at these two scales enables combining localized impacts at the community level with larger scale district/departments benefits for a larger number of residents. At the same time, it allows to tackle coastal erosion impacts on communities while also addressing larger environmental challenges. Results are also achieved at both short and medium timeframes, with the catalytic projects enabling short term responses to urgent community needs and with transformative projects ensuring a structural and sustainable approach to coastal resilience. Ultimately by increasing awareness and capacity on CC adaptation, this component will support outcome 3 from UN-Habitat's Flagship Programme 3 "Resilient Settlements for the urban poor". This outcome is "Enhanced capacity among all levels of government and core partners to effectively coordinate action towards building the resilience of the urban poor, and to access and mobilize investments".

In particular, outcome 3.2. is structured into 4 outputs: Establishment of EWS (output 3.2.1.); Integrated NBS for urban flood adaptation (output 3.2.2.); Mangrove restoration (output 3.2.3.); and Climate resilient agriculture (output 3.2.4.). The overall approach aims at leveraging the existing natural environment and its ecosystems services as a tool to respond to main hazards: flooding, erosion, sea level rise, and droughts. In addition, the effects derived from the outputs aim at reducing poverty and vulnerabilities, but also at safeguarding the natural environment and its provision and regulating services. In addition, it specially targets most vulnerable groups in the targeted areas, fisheries related workers and farmers. For more detailed info see Annex 3, where all subprojects are presented, and annex 6 for the Environmental and Social Plan.

To conclude, outcome 3.3. delivers one output: Trainings for Municipal staff and communities targeting sub-projects implementation and/or maintenance (Output 3.3.1.). This output underpins the sustainability of component 3, as it is the tool that ensures full empowerment of the subprojects by the local communities, their ability to maintain and manage the activities, and that inclusion of all groups is guaranteed through the whole component development.

Figure 15 presents the rational how the outputs of component 3 represent an adaptation response to the impacts and vulnerabilities characterizing the specific context (defined in chapter 1). The outputs, of course, derive from the identification of outcomes, which depend on the formulation of the three components and the long-term goal. The linkages between assumptions and background, outputs, outcomes, components and long-term goal, are presents through the Theory of Change model (Figure 12).

Figure 14: How outputs under component 3 respond to the assumptions and background of the ToC of the project

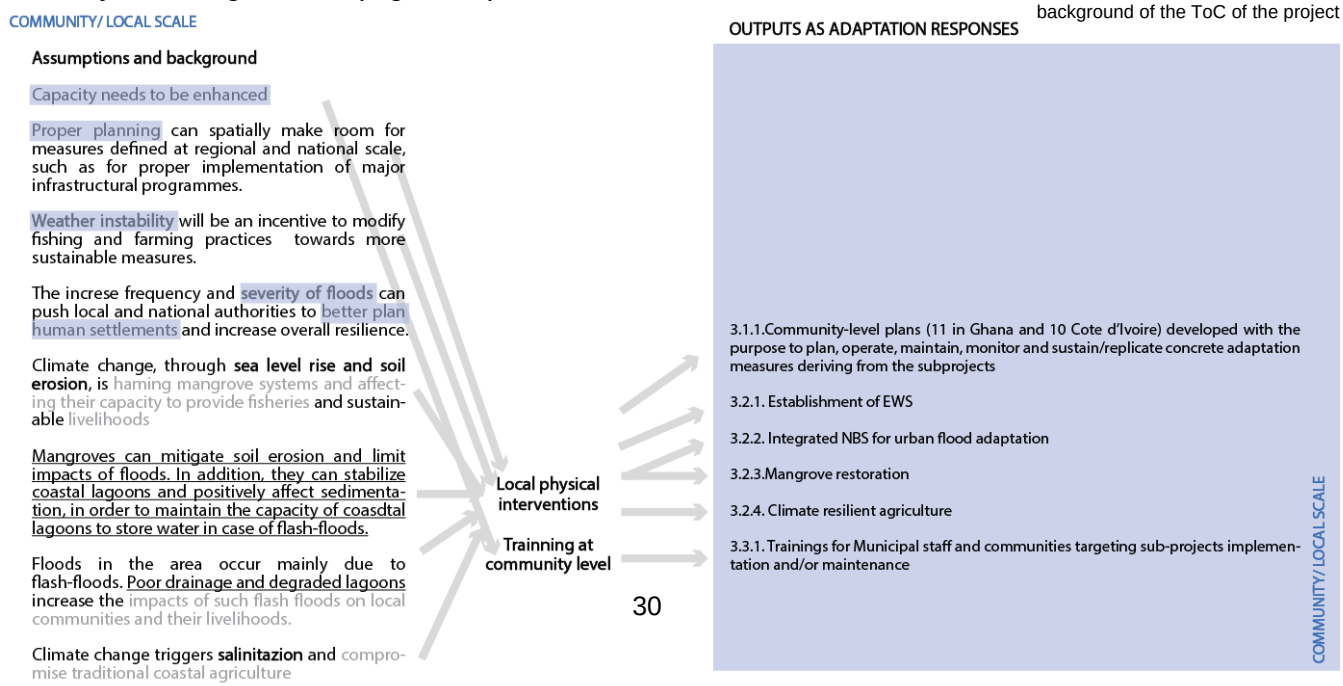


Table 5. Project Components

Problem description	Adaptation measure	Outputs	Activities	Suitability	Beneficiaries		Target areas	Total project cost	Executing entities	Effectiveness
					Direct	Indirect				
COMPONENT 1. Improved coordination of local and national governments in the Region to cope with climate change, to integrate major infrastructural projects in their spatial strategies, and to learn from each other in order to face common transboundary cc-related hazards										
In the region, there is a lack of vertical coordination in terms of climate change priorities, as well as in terms of spatial strategies to adapt to climate change. In addition, there is poor understanding on how coastal dynamics, and natural and socio-economic systems interact, and how these interdependencies lead to increased vulnerability to climate change. Scientific data and knowledge are fragmented or not integrated in a systemic way. Capacity also needs to be enhanced among government to build, mainstream and manage such knowledge. There is thus need to invest in a better understanding of the regional, national, and local interdependencies between climate change, and ecosystems and socio-economic dynamics. Linking these with communities' resilience will be paramount. On the other hand, a regional institution that can be the engine of such capacity building, coordination building and experience sharing exists: the Abidjan Convention.	Improved coordination (about climate adaptation measures, spatial strategies, climate policies and data availability) capitalizing on the existence of the Abidjan Convention	1.1.1. Set up a work plan with the Abidjan Convention for the initiatives and events to mainstream (live and digitally) lessons learned and to boost capacity to adapt to climate change	I) Meeting with authorities in charge for defining needs and chances; II) activity plan (of events) and responsibilities mapping; iii) Validation meeting with the authorities in charge vi) set up of a website (or page within the Abidjan convention website; iv) communication all over the years of the project.	Taken its mandate, the Abidjan Convention is best placed institution to ensure regional coordination to adapt to climate change, to strengthen capacities of national government, build context-based knowledge, and share lessons learned to promote replication of best practices	Everyone with internet access, specially planners and development professionals		Ghana, Côte d'Ivoire and other countries withing the Abidjan Convention	81,500	Abiidjan Coventio n	Set up of a work plan and of a web-page to implement coordination activities, capacity building and knowledge sharing adaptation at regional level
		1.1.2. Round-tables for regional bodies and national governments (through the Abidjan Convention platform) to agree on spatial strategies for a coordinated implementation of climate change adaptation	I) Mapping of the regional projects and spatial strategies calling for better coordination; ii) semestral meetings (8) at regional level; iii) semestral meetings (8) for national governments to mainstream information derived from the regional meetings (prioritizing the involvement of countries hosting trans-boundary initiatives)		Everyone with internet access, specially planners and development professionals		Ghana, Côte d'Ivoire and other countries withing the Abidjan Convention	103,000	Abiidjan Coventio n	A set of events (round tables) will allow Governments to coordinate themselves about adaptation, climate policies and spatial strategies.
	Improved shared knowledge in terms of climate risks, drivers and hotspots to guide and prioritize climate adaptation measures in the region	1.1.3. Regional Assessment identifying key common challenges, climate-change hotspots and priority areas (including trans-boundary issues) and recommendations for climate change adaptation at different scales	I) desk research from existing literature (scientific and grey literate) about common challenges; ii) GIS analysis of key hotspots based on past events, impacts and vulnerability; iii) identification of cross-boundary hotspots; iv) validation of results through the Abidjan convention platform; v) drafting recommendations; vi) printed and online		Everyone with internet access, especially planners and development professionals		All countries within the Abidjan Convention	98,000	Private sector	A publication presenting the results from the regional assessment will provide common basis and data to set adaptation actions and identify priority areas
	Improved capacity of regional and national bodies to use existing tools for planning and designing climate adaptation measures	1.2.1. Trainings for regional bodies and national governments (through the above-mentioned platform) for increasing capacity about the use of data and tools to foresee and manage climate change-related risks and impacts	I) material preparation for enhancing climate adaptation knowledge; ii) workshops and trainings at national level (8); iii) workshops and trainings at district level (8);iv) to mainstream the model and monitoring system into government processes of planning and monitoring		240	Targeted disctricts	Ghana, Côte d'Ivoire and other countries withing the Abidjan Convention	92,000	Abiidjan Coventio n	Regional and national governments will be trained and improve skills in terms of existing tools to build climate adaptation
	Improved knowledge sharing of lessons learned and best practice to mainstream climate adaptation measures among similar contexts	1.3.1.Cross-fertilization events to mainstream at local level experiences from community plans and implementation of sub-projects all over the region	I) project regional SC meetings (5), also to share lessons; ii) project national Sc meetings (7 in each country); also to share lessons; iii) Best practices and guidelines published and shared online; iv) project video with baseline and results; v) developing and producing communication materials; vi) peer-learning events (4); v) support the Abidjan convention resource centre		400	West Africa Governments	Ghana, Côte d'Ivoire and other countries withing the Abidjan Convention	158,000	Abiidjan Coventio n	Governments in West Africa will have concrete best practice examples of building-with-nature adaptation options to protect their settlements and strengthened livelihoods from climate change
2. COMPONENT 2. Strengthened role of national adaptation plans in the spatial planning practice at national and sub-national level and improved capacity of governments in adapting to climate change										

Spatial planning practices are lagging behind on-going growth due to lack of institutional and technical capacities. This results in hazard prone settlements, encroachment of natural assets, and pollution. Ultimately this not only increases communities' vulnerability to climate change impacts, but also compromises their path towards sustainable development.	Promote climate change resilient coastal development through sub-regional and district-level spatial development frameworks and to strengthen institutional capacities to develop, use and update these spatial frameworks	2.1.1.Two Sub-national-level Spatial Development Framework/District level Spatial Development Frameworks: 1 targeting the Volta Delta coastal area (Ghana) and one targeting the Grand Pont region (Côte d'Ivoire).	i) institutional collaboration, ii) data analysis; iii) plans preparation; iv) plans adoption; v) strategic environmental assessment (by law).	Spatial planning is an effective decision-making tool to manage development along the coast, including (spatially) identifying climate change-related risks / impacts and vulnerabilities with the purpose to avoiding future development in risk areas and identifying sustainable development options. Governments recognize lack of regional and district development frameworks with climate change mainstreamed in it, as well as insufficient capacity for spatial plan preparation and implementation. It will be ensured plans will be aligned with National and Regional coastal management and sectoral development strategies.	400	634,458	Ghana and Côte d'Ivoire Specifically: Volta Delta Coastal areas (Ada East, Ada West and Anloga/ Keta areas) + Region de Grand Pont	874,600	LUSPA & MdP	Two plans (one per Country) will be elaborated. In addition, activities under this component will allow national-and district-level government to plan and us spatial strategies for building climate adaptation. This will benefit the populations living along the coast in the target areas
		2.1.2 Local-level Spatial Development Frameworks (Local development plans): two in Ghana targeting Ada East and Anloga/ Keta districts, and one in Côte d'Ivoire targeting the department of Jacqueville, with climate change-related coastal risks identified and measures to increase coastal resilience proposed	i) institutional collaboration, ii) data analysis; iii) plans preparation; iv) plans adoption; v) strategic environmental assessment (by law).		220	275,147	Ghana and Côte d'Ivoire Ada East and Anloga/ Keta disctricts + Jacqueville	557,000	LUSPA & MdP	Three plans (two in Ghana and one in CdI) will be elaborated. In addition, activities under this component will allow local level authorities to plan and us spatial strategies for building climate adaptation. This will benefit the populations living along the coast in the target areas
Lack of national and district-level capacity to plan for coastal climate change resilience and to monitor and sustain project activities	Strengthened national and district level government capacities to manage the coast, including taking into consideration climate change impacts / risks and to monitor and sustain project activities	Output 2.2.1. On-the-job trainings and workshops to strengthen capacity of the Ministries of the Environment and Sustainable Development and of Planning and Development and municipalities (Ghana), and of of Land Use Spatial Planning Authority (LUSPA) and Municipal District Assemblies (MMDAs) (CdI) to develop, implement, and update spatial development frameworks, to develop, use and update spatial development frameworks	I) guiding the ministry of Plan and Municipalities assigning one person to work in their offices for an amount of time defined together; ii) support Ministries and Municipalities in mapping existing regional/national/international adaptation standards and legislation; iii)support the Ministry and Municipality to undertake actions to align their contexts with international/regional/national standards; iv) train the Ministries and municipalities about specific planning methods and approaches (based on context's needs).	The combination of planning activities under outputs 2.1.1. and 2.1.1. and this output creates the perfect ground for building capacity though both theory and practice	80	200	Ghana and Côte d'Ivoire	293,000	UN-Habitat	Governments will have trained staff with the capacity and tools to accurately identify and manage coastal climate change-related risks / impacts and plan for the future
COMPONENT 3. Municipal staff, communities and local stakeholders have successfully planned and implemented priority sub- projects to cope with climate-change related issues, such as sea level rise and floods, and access to climate-resilient livelihoods										
One main vulnerability of coastal communities is their limited capacity to adapt to climate change related hazards. This is largely due to lack of awareness and knowledge on climate change impacts and its linkage to unsustainable human processes	Strengthen community awareness and capacities to adapt to climate-related coastal hazard and threats through community planning. Community planning is needed for ownership of proposed concrete climate change adaptation measures.	3.1.1.Community plans (21) developed in Ghana and Côte d'Ivoire with the purpose to plan, operate, maintain, monitor and sustain/replicate concrete adaptation	i) community mobilization and awareness; ii) community management mechanisms set up; iii) concrete interventions planning; iv) concrete interventions start up; v) concrete intervention maintenance; vi) concrete interventions replications options; vi) verification operation, maintenance, monitoring and replication.	Resilience is to be built also through bottom-up initiatives since communities have the capacity to better adapt to climate change. These activities will empower the most directly impacted people and ensure the long-	630	152,755	communities in Ghana and Côte d'Ivoire	1,859,360	NGO and private sector	Community plans will be provided. Ad the same time, Increased capacity to operate, maintain and replicate nature-based interventions, including monitoring, will be ensured.

		measures deriving from the physical interventions.		term sustainability of the whole project. The target communities have been identified as the most climate change vulnerable communities along the coast.						
Climate change related hazards sea level rise and storms (combined with CC vulnerabilities) is already resulting in increasing floods, sea level rise and consequent coastal erosion, accelerated sedimentation of natural systems that can absorb heavy rains, droughts affecting livelihoods.	Increased climate change resilience of coastal areas through EWS to minimize the impact of hazards on people and their livelihoods	3.2.1. Establishment of Early Warning Systems (EWS)	i) Detailed engineering study and design; ii) Buying materials; iii) Construction of EWS; iv) Technical training; v) Evacuation Plan, vi) Validation and training workshops; vii) Communication strategy and training tools; viii) Data management; ix) Institutional framework/ Governance instruments; x) validation and training workshops; xi) Field monitoring.	These interventions are suitable for the local context because they build on the existing ecosystems, and environmental and socio-economic dynamics. They aim at creating and restoring systems that together contribute to climate change adaptation, by minimizing risk (output 3.2.2. and 3.2.3.), minimizing the impact of risk (output 3.2.1) and ensuring livelihoods despite climate change (output 3.2.4 and indirect benefits of output 3.2.3). All outputs represent cost-effective solutions, and allows continuous healthy interaction between the ecosystems and local communities.	17,797	136,490	communities in Ghana and Côte d'Ivoire	1,533,500	NGO and private sector	N of communities where "Establishment of Early Warning Systems (EWS)" was implemented
	Increased climate change resilience of coastal areas through NBs solution for floods adaptation that will facilitate the run-off of water during heavy rains (in order to prevent settlements to get flooded) and increase the capacity of the area to absorb and detain rain, in order to prevent floods and make stock of water when droughts occur	3.2.2. Integrated NBS for urban flood adaptation	i) Detailed engineering study; ii) Project and Coordination set up; iii) iv) Technical drawings; v) Lagoons cleaning; vi) Construction of bioretention and detention facilities; vii) Field monitoring; viii) Maintenance of bioretention and detention facilities; ix) Coordination support.		18,937	33,589	communities in Ghana and Côte d'Ivoire	1,464,522	NGO and private sector	N of communities where "Integrated NBS solution for urban flood adaptation)" was implemented
	Increased climate change resilience of coastal areas through mangrove restoration. Thus, mangrove both mitigate the effect of riverine/coastal floods protecting the settlements and prevent soil erosion/accelerated sedimentation (caused by sea level rise, storms, and floods) to occur. In this way, the water management is ameliorated, and floods mitigated. A secondary positive effect of mangroves restoration is the fish production (as an alternative livelihood when climate change harms the agricultural production)	3.2.3. Mangrove restoration	i) Detailed engineering study and design; ii) Buying materials; iii) Mangrove nursery; iv) Wildlings/seeds; v) Carbon offset initial documentation; vi) Carbon offset development partner process; vii) Carbon Validation; viii) Registration; ix) Mangrove planting; x) Nursery personnel; xii) Nursery management; xiii) Transport; xiv) Coordination support; xv) Carbon Audit Cost; xvi) Carbon Project Operational Costs; xvii) Maintenance; xviii) Field monitoring; xix) CREMA mechanism.		85,584	52,763	communities in Ghana	1,785,339	NGO and private sector	N of communities where "mangrove restoration" was implemented
	Increased climate change resilience of coastal areas through ensuring key livelihoods of communities, even when salt (due to sea-water intrusion) and variability of rain patterns trigger agricultural production. In particular, a sustainable use of water, the adoption of salt resilient crops and a proper soil management will ensure the production of food despite climate change.	3.2.4. Climate resilient agriculture	i) Detailed engineering study and design; ii) Identification of plots (stakeholders meeting and field work); iii) Water infiltration construction; iv) Realization of training centre for salty crops; v) Training costs; vi) travel costs; vii) Coordination support; viii) Water infiltration and salty crops; ix) Water infiltration; x) Capacity building under component 2		2,160	1,080	communities in Ghana and Côte d'Ivoire	2,588,414	NGO and private sector	N of communities where "climate resilient agriculture" was implemented
Poor capacity of local communities to implement and ensure sustainability of adaptation measures	Local experts and communities will be trained, to ensure full empowerment and sustainability of the subprojects (outputs 3.2.1, 3.2.2, 3.2.3, 3.2.4). Equitable access to the training will be ensured (see ESMP and GP related sections)	3.3.1. Trainings for Municipal staff and communities targeting sub-projects implementation and/or maintenance	i) on the job training during the development of community plans (3.1.1); ii) Trainings (11 trainings per location, grouping 2 to 4 communities for 3 different topics): a. sustainable water management and the impact on drainage; b. pollution, agriculture and fresh-waters; c. waste management system. c. funds raising for further supporting physical interventions; -; -climate resilient agriculture	The combination of subprojects and this output creates the perfect ground for communities to learn from subprojects and to ensure durability and effectiveness of the subprojects through their new knowledge	630	152,755		206,000		Communities and local experts are (equitably) trained under five thematic areas key for the subprojects implementation and management, and for their own resilience to climate change

PART II. B. PROMOTION OF INNOVATIVE SOLUTIONS

Innovation in climate change adaptation strategies is translated on the capacity of a project to implement new approaches, methods, solutions or improving what it was previously established for increasing climate resilience and reducing climate vulnerability. In the current project, innovation will be achieved by framing the three project components with different approaches tailored to the development requirements. These approaches are **Mainstreaming Regional Adaptation**, **Strategic Spatial Planning, Area-based Development,** and **Integrated Land System Approach**. Innovation will be also reflected on specific activities of the subprojects from component 3, which can be categorized in **socio-institutional, financial,** and **technical innovations**. The sum of both, the approaches used in the components and the categorized innovations in each subproject deliver a total of **11** advanced innovations developed contextually. Table 6 shows the different innovative approaches for each component and table 7 the types of innovation for each subproject in component 3.

Table 6.Overview of the implemented innovations in the project.

Component 1	Mainstreaming regional adaptation
Component 2	Strategic spatial planning approach
Component 3	Area-based Development and Integrated Landscape System

Table 7.Overview of the implemented innovations in the project.

Subproject / Type of innovation	Urban flood resilience	Mangrove restoration	Climate-resilient Agriculture	Establishment of EWS
Socio-Institutional	4. Community Resource Management Areas (CREMAs)			
				5. Local Disaster Volunteers
		6. Carbon offsets	7. Agri-food business models	
Technical	8. Building with traditional knowledge		9. Soil, land, and water management	11. Upscaling and replication Early Warning System
			10. Salt-resilient crops	

Mainstreaming Regional Adaptation:

The participation of the Abidjan Convention (AbC) is paramount to promote a change of paradigm on how climate hazards are addressed in Western Africa's coastal areas and marine regions. The AbC can also facilitate the implementation and replication of innovations focused on climate change adaptation in the region if they are supported with the right inputs. The activities described in the theory of change that constitute component 1 are focused on mainstreaming practices for knowledge sharing, implementing cross-boundary regional assessments, and improving coordination of strategic responses for climate adaptation.

These activities can deliver innovation by enhancing and creating spaces for dialogue which can furtherly boost transformative changes to address regional climate threats while strengthening the regional network and reinforcing their capacities for disaster risk reduction. Bringing these innovative actions, the organization can strengthen its capacity for improving horizontal and vertical integration of different stakeholders such as governmental institutions, civil society, development agencies, and local communities, enabling the development of multi-sectorial, well-organized, and inclusive regional climate adaptation strategies.

Strategic Spatial Planning:

Traditional spatial planning is mainly based on rigid predetermined statutory plans. In this procedure, spatial plans are developed by high-level decision makers in a top-down coordination, with a small number of stakeholders participating and limited flexibility for spatial planning throughout the operation period. In this context, innovation is expected to be achieved by implementing a **strategic spatial planning** approach that covers all three components as a cross-cutting strategy. Spatial development plans can be used as tools/decision-making frameworks to reduce future risks in development areas and identify and prioritize adaptation measures for those areas at risk (i.e. vulnerable). By integrating climate change resilience into strategic spatial planning, governments can better prepare high-exposed areas and vulnerable communities for preventing future risks with a common long-term vision, combined with short-term priorities.

The understanding of strategic spatial planning in this project is innovative as it shifts from current trends of detailed, prescriptive, and static plans to developing more flexible and dynamic guiding tools for national and local governments. **Strategic planning** aims at being flexible to continuously changing demands, directing efforts towards processes through rapid planning methodologies focusing on the urban structure. This methodology will integrate climate change risk and vulnerability data and the knowledge acquired from the interventions to guide the planning processes at a larger scale and define new priority projects, supporting long and short-term decision making. The sustainability of this approach is ensured by collective knowledge playing a key role through participation, and by targeting implementation through strategic and feasible interventions. These planning processes will tackle potential areas for growth and development, key infrastructure development, areas for environmental preservation and non-modified areas.

The *benefits* of using strategic spatial planning are that at all scales, these plans will establish a strategy for development that is **flexible** to regular updating and evaluation. Furthermore, it enables the integration of key issues not always considered in planning processes such as environmental protection or climate change resilience. Its strategic level and flexibility allow for the synthesis of all these urban critical parameters to structurally input the future development of an area. However, crucially important is the **identification of high-risk coastal erosion and flooding areas**, where development should be avoided and/or, where possible, existing infrastructure and assets should be protected. In general, the adoption of spatial planning in Ghana and Côte d'Ivoire helps to physically define climate change adaptation measures, reduce uncertainty, and increase awareness of climate change.

Area-Based Development (ABD) and an Integrated Landscape System:

The proposal is built following an Area-Based Development approach, focused on localizing efforts for improving climate resilience in a comprehensive and well-defined geographic area. This approach strengthens the integration of cross-cutting climate change adaptation measures within the different interdependent sectors, elements and actors that build up the complex peri-urban system. Applying an ABD approach, different strategies within the environmental and socio-economic spheres are intertwined in a complex network. Evaluations of ABD projects implemented by international organizations suggest that they are often very effective in responding to complex conflict characteristics on sub-national levels across the world and its development is recommended as appropriate in disaster-related environments (Vrbensky, 2008; UNDP, 2007; UNDP, 2003).

When applying an ABD approach, innovation is defined by the local spatial context, applying novel solutions that have not been tested or implemented in the region. In this project, Ghana, Côte d'Ivoire and their benefited communities will boost their capacities to cope against climate change hazards by applying territorial, urban and community plans with a specific focus on climate change adaptation. In an ABD, each subproject can be defined as a conventional system capable of increasing adaptive capacity in a specific sector (incremental adaptation), however, when different systems are compiled and aggregated in a comprehensive strategy for its implementation, they create an innovative approach in the intervened area becoming an **integrated landscape system** with a prominent level of adaptation complexity. In an integrated landscape system socio-ecological changes, climate adaptation technologies, and institutional support are key factors to enhance this transformation, where innovation can be better integrated to the region reflected on improved livelihoods, community-based management, and efficient technological solutions.

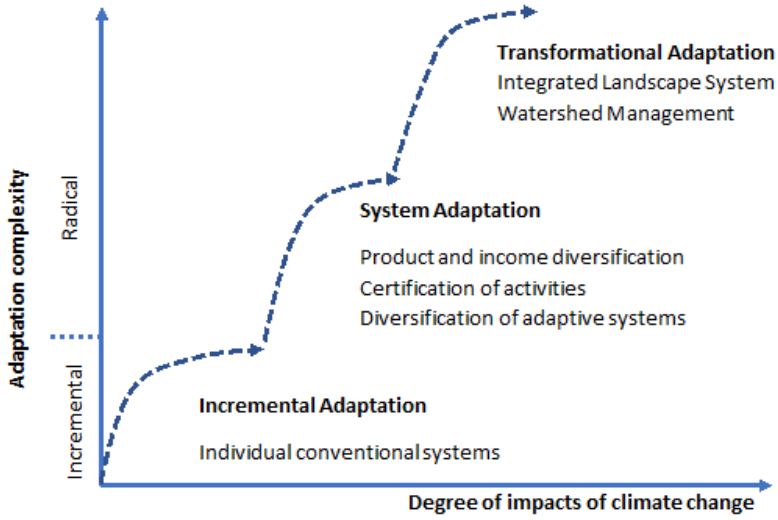


Figure 15: Higher degree of climate change impact requires higher levels of radical innovative adaptation. (Adapted from Verbug, R et al. 2019)

Community Resource Management Areas (CREMAs)

CREMAs in Ghana will be used as an ongoing social innovation in the intervention areas, which is mainly focused on empowering communities to manage and administrate the natural resources of local ecosystems. The CREMA process includes the identification of ecosystem services and the value that communities attach to them, allowing a further mapping of buffers, conservation areas and sustainable activities based on spatial planning. In addition, CREMAS are not just a platform for managing and administrate natural resources provided by regional ecosystems, but also supports sustainable economy activities and establishes formal local governance structures and validates the interdependency between the local socio-cultural context and the biophysical conditions of the region. For the purpose of the project, CREMAS will be integrated as an innovative community-based initiative to localize the adaptation interventions, to ensure its codesign, implementation and maintenance. The income and products from the ecosystem services and the strengthened economic activities boosted by the adaptation measures will be shared to benefit all critical stakeholders, including landowners, croppers, producers, and fishers who will be directly linked with the local adaptation interventions.

National Disaster Volunteers

For the Early Warning System implementation, communities' participation will be needed for its successful operationalization, especially to have ***National Disaster Volunteers***, which will be responsible for disseminating information, identifying hotspots in water delta communities, and raising awareness among the community to reduce climate exposure. They will also work as communication channels for each community. The volunteers trained

by Executing Entities during the duration of the project with dedicated budgeted workshops, will represent the focal point for disaster preparedness and response at the communities.

Carbon offsets

Communities' ownership of the interventions and activities is transcendent for the success of the project, and such activities must be capable of creating and improving communities' livelihoods to reduce their climate vulnerability. The project is focused on enhancing long-term sustainability and ensuring livelihoods with an innovative financial strategy ensuring **blue carbon credits** generated by the reforested mangrove**.**

The blue carbon project links in an innovative manner the environmental services provided by the local wetlands and the mechanisms set up to pay for them. In this sense, coastal protection is funded through the activities and benefits that it provides to residents, local businesses, and communities. In this strategy, plans at the community level act as the negotiating board to establish agreements for the next phases of funding between private sector receivers of environmental services and community/government as providers of the environmental services to protect from coastal erosion.

Agri-food business models

The diversification and production of new crops modifies the offer and demand of crops in the food market and affects the value chain in the local agricultural sector. In order to address these changes in the economic sphere of agriculture activities, innovative sustainable business models need to be assessed a priori through a socioeconomic analysis of the communities. The analysis and development of sustainable business models will be an innovative financial strategy in the climate-resilient agriculture subproject as the models will be tailored to the local needs and economical context, in order to fit to the community's business structures and to increase projected yield.

International best practices adapted to traditional knowledge and local skills

Nature-based solutions and green-grey infrastructure interventions for reducing vulnerability to floods will be adapted from international best practices following traditional local knowledge and skills for increasing climate efficient technical solutions. Interventions include testing and promoting cost-effective alternative solutions and innovative techniques (i.e. ecosystem-based solutions and building with nature) to protect the coast (i.e. reduce the impacts of climate change and erosion and flood) and enhance community-level income generation through diversified and strengthened livelihoods in the inland, which can be replicated in other countries in West Africa, through transformative interventions.

Furthermore, innovation through NbS aims to reduce costs of implementation, operation, and maintenance in comparison with traditional engineering interventions. During the last decade, the Ghanean government attempted to reduce coastal erosion in Ada district through the construction of 15 groynes. The structures did trap sediments and built up the beach at Anloga/ Keta. However, the structures also reduced sediment flow to the east, resulting in increased coastal erosion there. Moreover, the intervention came at a high cost: US$183 million. Therefore, for the government to be able to protect other coastal areas from erosion and inundation (caused by a combination of sea-level rise, increase of intensity of storms and human causes), alternative lower-cost building with natural coastal protection solutions needs to be identified. The same accounts for Côte d'Ivoire, where the government doesn't have the financial means for such hard infrastructure interventions. Therefore, this project aims to show that building up with natural coastal protection measures are environmental-effective and cost-effective and promote the best options in West Africa.

Soil, land, and water management

The climate-smart agriculture subproject is focused on improving communities' livelihoods by increasing natural resources sustainability and increasing resilience to climate hazards (e.g., salt intrusion, floods). The climate-smart agriculture subproject focuses on implementing a holistic and innovative approach for managing non-conventional water resources, rehabilitation, and conservation of marginal lands for agricultural uses and adapting agroecology activities which reduce soil erosion and increase soil fertility levels. (Verbug, R *et al.* 2019). In addition to this, the development of sustainable agriculture practices will focus on implementing a year ground-cultivation strategy to include both rainy and dry seasons where an off-season production is guaranteed. Innovation is also reflected on upscaling benefits of climate resilient agriculture by ensuring cost-effective activities, where solutions are showcased in the community training centre and then upscaled in a regional level.

Salt-resilient crops

The implementation of a **climate-resilient agriculture** strategy also innovates by including activities such as diversifying crop systems and introducing new varieties of crops (especially salt-resilient). Agriculture resilient activities will also help testing recent advancements on specialty groups of alternate crops (oil seeds, legumes, cereals, medicinal, lignocellulose, and fruit crops) which can adapt in marginal environments. This subproject will also help testing the availability of alternative water resources (saline water, treated wastewater) for irrigation.

Upscaling and replication of Early Warning System

EWS for flood risk reduction have been only implemented in the capital city of Ghana and currently, technology invested in the system is obsolete. With the implementation of an Early Warning System not just communities will increase their resilience to climate change impacts. The National Disaster Management Organization (NADMO) will be supported by the information gathered in the area and it will actively increase their abilities for disaster risk management and emergency response in the region, possibly allowing replication and expansion from the outcomes learned of the project.

Throughout the monitoring phase, data, monitoring models and methods need to be shared, as well as best practices. This will be done through the Abidjan Convention and the University of Cape Coast. Support monitoring of project activities, including innovative models and methods to do so, and sharing and replication of project best practices/lessons in Ghana and Côte d'Ivoire and West Africa, including districts and departments where these type of solutions and knowledge sharing has not yet happened in a systematic and programmatic manner. Addressing the coastal challenges in West Africa described before requires the involvement of and close collaboration between academic experts, engineers, decision-makers, and local communities within a joint learning environment.

• PART II. C. ECONOMIC, SOCIAL AND ENVIRONMENTAL BENEFITS

The different components that structure the theory of change deliver significant economic, social and environmental benefits that are described in the following section. Given that communities, and especially vulnerable groups and women, have been involved during the project design phase and will be involved during the project implementation, they have had the opportunity to directly influence the selection of project activities and outcomes, thus

influencing their direct project benefits. The way livelihood options will be enhanced depends on the inputs (i.e. specific needs and issues expressed) from vulnerable groups and women.

Economic benefits: The project targets the most vulnerable coastal groups and low-income communities, who are relying on natural resources such agriculture for income generation. In the case of Côte d'Ivoire, the coastline is the principal economic national resource. The diverse habitats characterizing the littoral constitute an asset, with important cultural and touristic value. The principal activities in the coastal area include fishing, agriculture, forestry, factories and tourism. Also, the Ebrie Lagoon has an important socio economical location at a country scale, mostly due to Abidjan being situated there. Abidjan represents 60 percent of the industrial sector employment, 80 percent of the industrial production and concentrates 90 percent of the commercial added value of the country, due to its coastal location.

Under clear signs of agriculture and water resources in the coastal zone being highly impacted, Ghana's Government has recognized how climate change and the cost of climate change response is a serious threat to progress. This increases the level of poverty and especially impacts women. Flooding, for example is an obvious and immediate threat to economic growth, energy supply, roads and transport, food and agriculture, education, health, water and sanitation, and social protection.

The above highlights how the existing degradation of the environment in the coastal areas is a major threat to national and local economies. Improved regional coordination (as per component 1) and strategic planning (as per component 2) enhance sustainable development and the implementation of concrete adaptation interventions (as per components 3) will reduce losses, support food security, and support a more sustainable economy. The project will protect the current communities' assets and sources of income, where possible, and support livelihood opportunity in less risk / vulnerable areas (i.e. more land-inwards). It will also aim at generating revenue through community work, whenever possible, giving opportunities for youth employment in construction activities. The above would especially support women as they face challenges related to working opportunities and its derived poverty.

Social benefits: When dealing with climate change, it is frequent to find that most socially vulnerable communities are the ones located in risk areas with high exposure to climate change hazards. These communities tend to be socially excluded, often neglected from development investments which implies, among other challenges, lack of basic services and possible health problems. In addition, current trends of development are deriving in inefficient use of resources, enhancing insecurity and inequality. Women are specially affected due to persisting gender inequalities that undermine their adaptive capacities.

In Côte d'Ivoire, this inequality, and its derived poverty, have led to an increased need for means of livelihood with consequent migration of the population towards the coastal zones. This pressure on ecosystems is enhancing several problems such as over-exploitation of resources, land property and social conflicts. In Ghana, urban sprawl and unplanned growth is having the same effects. In the project targeted area, a direct linkage between highest levels of poverty and low-density areas has been identified. This also explains rural migration to urban areas, which frequently derive in informality. As indicated in the National Development Framework 2015-2035, urbanization is a driver of Ghana's economy, and it is clearly linked to poverty reduction.

To tackle these regional challenges, institutional response has to be well-targeted to areas that are linked through complex socioeconomic and ecological networks, where local climate impacts and disaster risk responses can affect the regional dynamics, improving or worsening regional adaptive capacity. In this context, the Abidjan Convention has a relevant

role in assessing different key components that can improve the execution of efficient climate adaptation strategies. The benefits of improving the coordination capacities of regional and national bodies (as per component 1) are critical for reducing climate migration rates, reducing the number of climate refugees, and tackling regional poverty. The negative impact of these challenges can be diminished through the adoption of instruments that facilitate the communication of the different institutions in charge of climate adaptation, using knowledge-sharing platforms, where lessons learned of previous implemented adaptation programs can be shared and mainstreamed for improving climate adaptation responses. Technical information provided by regional assessments can also be beneficial for improving spatial planning processes while increasing climate-adaptive capacities.

The above illustrates the need of a more resilient and social inclusive planning approach towards development (as per component 2) that will reduce climate change induced poverty, mortality, diseases and insecurity. This component delivers multiple benefits in human health, livelihoods, economy and sustainable environments using spatial development frameworks to accelerate spatial resilience, based on different approaches through ecosystem services and communities' participation. An important benefit to highlight of using spatial development frameworks is the capacity of preventing communities from settling in high risks areas, which reduce their exposure, and increase empowerment and long-term opportunities. Planning can also avoid diseases coming from environmental pollution and bad quality of urban spaces, and support on ensuring better services provision. These issues were highlighted by elderly people as a challenge they face. The implementation of concrete interventions (as per components 3) will protect these communities, reducing their vulnerability and improving their quality of life. This will directly increase their social resilience since their current poverty and lack of capacity prevents them from coping with the impacts of climate change.

Regarding social resilience, children have been identified as being specifically vulnerable. Due to high poverty and lack of adequate services and infrastructure, they face health risks (e.g. diarrheal or respiratory infections). Some educational services have been destroyed by coastal erosion and children have to travel for long through poor infrastructure. Moreover, in the project target areas in Ghana, especially in fishing communities, children trafficking exists and there is a high percentage of orphanages. This is a direct effect of extreme poverty, where parents are not able to take care of their children anymore because of reducing incomes and costs related to erosion. Through planning and concrete interventions, the project will aim at reverting and improving these conditions, ensuring long-term resilience. In addition, the project will specifically target women committees and select women and youth groups for certain trainings.

Ultimately, capacity building to strengthen community knowledge and response to climate change related hazards (as per component 3), as well as the participatory process through the whole project, will facilitate the contribution of local communities to the project. This will ensure ownership and it will enhance the inclusion and empowerment of minorities and vulnerable population in the decision-making processes. The integration of most vulnerable groups, for example women, will be ensured by quotas of participation, women group discussions and collaborations with women organizations. Youth also plays a key role in the whole process as a youth led development will facilitate sustainability and potentialize resilience. In DRR, women often face greater mortality, health risks and domestic and sexual violence in hazards events. During this project women will be recognized for their resilience in facing disaster and will play a role as active agents of change in helping communities to recover and adapt.

Environmental benefits: As previously mentioned, the way urbanization and development is taking place together with the changing climate, are strongly affecting the environment. For long time growth has not considered the natural dynamics in which it settles, and it has derived in land reclamation from environmental areas. The misuse of natural resources is altering to a great extent the ecosystems and its biodiversity, also increasing vulnerability to climate change.

In Côte d'Ivoire, due to industrial development, coastal habitats have degraded. It is estimated that 60 percent of mangroves areas around Abidjan have been lost. Infrastructure development has also impacted natural dynamics by reducing the amount of sediment that will flow downstream, deriving in coastal erosion and saltwater intrusion. The erosion in the littoral zone from Abidjan to Assinie is currently around 1-2 m per year putting shoreline settlements at risk, and the salinization of water and soil are negatively affecting mangroves and crops. Moreover, there is a waste management problem, and many lagoons are polluted.

In Ghana, deforestation is a critical problem. The extraction of mangrove for fuel wood and urban encroachment is particularly alarming. In the Volta region grassland gain and cropland loss has reached 30 percent in the last decade, while in Greater Accra region 22 percent of wetlands have been lost. In coastal areas erosion rates is around 1.5 per year, with bigger rates in the Volta estuary, 2-3m a year, and in Anloga/ Keta, around 8m per year. Moreover, there is a waste management problem, and many lagoons are polluted.

Naturally, communities settled in coastal areas benefit from the same regional ecosystem services provided by marine and coastal environments. At the same time, they can also be vulnerable to similar threats that are brought by fast-changing climate hazards such as sea-level rise, coastal erosion, or coastal floods. To improve regional adaptive capacity, it is crucial to build with nature and address climate challenges through Ecosystem-based strategies. To implement this approach, it is crucial to strengthen regional bodies´ capacities (as per component 1) to jointly coordinate activities with local communities. This can improve climate planning efforts and facilitate the implementation of regional environmental assessments, leading to environmental conservation practices, improved sustainable management, and restoration of ecosystems. These nature-based solutions are effective for increasing climate resilience and for reducing climate vulnerability in a regional scope.

Spatial planning, both at sub-national and district/department level (as per component 2) will aim at integrating the territory and its dynamics into the planning process. Nature and its systems will become part of the resilience development strategy in order not only to restore what has been lost and protect what remains, but also to potentialize and maximize the interaction of the built and natural environment. This will be implemented through the ecosystem-based interventions (as per components 3), which will tackle the roots of climate change challenges by working with nature. The community-based interventions will also benefit the environment by raising awareness and ownership from the local people on the importance of the ecosystems as a structural and indispensable element for their resilience.

Table 8.Benefits per proposed concrete project activity

Transformative and catalytic interventions	Economic Benefits	Social Benefits	Environmental Benefits	Specific benefits to vulnerable groups incl. women and youth.
3.2.1 Establishment of Early Warning Systems (EWS)	Reduction of loss and damage from natural hazards as predicted to increase under the changing climate (e.g., flooding and erosion). Anticipate drought-related crisis situations and reduce impact and degradation of ecosystems and infrastructures Costs reduction due to increased resilience of the cities to the hazards Improved economic environments through new job opportunities and, in general, better conditions for businesses and economic activities	Increase the capacity of individuals exposed to hazard to take action to avoid or reduce their risk and prepare for effective response The data and information generated by each community will strengthen the district capacity; build cohesion and provide platforms at the district level. Security from future floods Community awareness and different training strengthen the disaster risk prevention, preparedness, and response. Community awareness of effective and safe evacuation routes during floods. Improve capacity to design and implement adaptation measures Poverty reduction associated to climate disaster. Capacity building for future climate adaptation. Avoiding losses and disruption of basic services thanks to EWS will also contribute to public health and poverty alleviation.	Increase the community awareness regarding the linkages between the state of the environment and their well-being and safety. Protection of the environments from human and climate-related impacts, and through the restoration of degraded ecosystems. Hazard zone demarcation and the identification of evacuation routes. Good risk management decisions based on accurate information Allow to cope with drought-related crisis situations and on the other hand to avoid overexploitation of natural resources to compensate losses due to drought impacts Improve data memory of climate-related disasters	Women: they will benefit from training ecosystem services, mainly working on processing and market. Youth: They will be included in the communication strategy, trainings and drills for the EWS. Youth can pursue filed activities together with experts, will also be supported to allow for synergistic activities and interdisciplinary research. Elderly: increased security during flooding time and increase awareness of extreme weather events well in advance. Children: increase preparedness and response measures when a disaster occurs, transmitting messages about climate-related hazards and disasters to the new generation
3.2.2 Integrated NBS for Urban Flood Adaptation	Increased security from future floods and protection of land erosion. Poverty reduction associated to land loss (housing, infrastructure, etc.) Capacity building for future climate adaptation. Protection of social dynamics and traditions. Recreational area and attractive landscape. Closer connection with natural environment and waste management raised awareness	Reduction of loss and damage (infrastructure, housing, etc.) from natural hazards as predicted to increase under the changing climate Continuation of economic activities (businesses, agriculture, markets, etc.) Possible profit from new plants (plant fruits, vegetables) in vegetated areas around the facilities.	Soil stabilization through vegetation replanting. Vegetation will increase sedimentation and allow land to rise together with increasing sea level rise. Flood reduction through increased water infiltration. Suitable conditions for conservation of the biodiversity within the area and against climate effects. Reduced pollution and spreading during extreme weather events associated with climate change. Protection of ecosystem services. Improved water quality and conveyance through purification and filtration.	Women will benefit from the ecosystem services. Youth: increased livelihood opportunities linked to capacity building on restoring lagoons ecosystems. Elderly: increased security due to flood protection and reduction of loss and damage. Children: increased food security and access to education by promoting sustainable livelihoods to improve families' economic capacities. Reduce sickness due to waterborne diseases caused by pollution.
3.2.3 Mangrove restoration	Livelihood creation (fisheries, mollusc collection, eco-tourism). Reduction of loss and damage from natural hazards (flooding and erosion).	Increased security due to flood and erosion protection. Poverty reduction. Improved food security. Capacity building. Protection of social dynamics and traditions.	Soil stabilization. Flood reduction. Biodiversity conservation. Water quality maintenance. Carbon storage. Protection of ecosystem services	Women: increased livelihood opportunities. Between 1,000 to 2,000 women are involved in clam and wood collection. Youth: increased livelihood opportunities linked to capacity built on restoring mangrove ecosystems, as well as on traditional fisheries, or educational/eco-tourism activities. Elderly: increased security due to flood protection and reduction of loss and damage. Children: increased food security and access to education by promoting sustainable livelihoods that will improve families' economic capacities.
3.2.4 Climate Resilient Agriculture	Livelihood creation (climate resilient agriculture).	Poverty reduction. Improved food security. Capacity building. Protection of social dynamics and traditions.	Environmental protection by reducing salinity levels induced by climate change.	Women: increased livelihood opportunities. Between 2,000 and 4,000 women are involved in farming and agro-industrial related processing activities and marketing of agriproducts. Youth: increased livelihood opportunities linked to capacity built on improving agriculture as well other traditional fisheries, or educational/eco-tourism activities. Elderly: increased food security and nutrition due to improvement in agriculture. Children: increased food security and access to education by promoting sustainable livelihoods that will improve families' economic capacities.

PART II. D. COST-EFFECTIVENESS

The design and implementation of the project focuses on maximizing the size of the 'concrete' interventions under component 3 to directly benefit the most vulnerable populations; thus, focusing the 'non-concrete' components (component 1 and 2) to those activities required for supporting the appropriate implementation of the 'concrete' interventions, to further develop a framework, enhancing climate resilience through spatial and land use planning (component 2) and to ensure ownership, sustainability and replication of the whole project (component 3).

Cost-effectiveness rational by component

Component 1 Improved coordination of local and national governments in the Region to cope with climate change, to integrate major infrastructural projects in their spatial strategies, and to learn from each other in order to face common transboundary cc-related hazards.

This component focuses on improving the coordination of different regional bodies to map climate change adaptation needs and prioritizing transboundary adaptation activities which are designed to have a high rate of return and multiple benefits. In addition to this, the investment on strengthening multilevel regional coordination of administrative and planning institutions in charge of adaptation planning improves the efficiency and cost-effectiveness of developing climate action plans by reducing economic loss and duplication/contradictions in the administrative processes, reducing probability of policy misalignment and delay, and avoiding disorganization and misdirection throughout the different stages of the adaptation process. Cost-effectiveness of this component is very high. Although it represents 3.5% of the total project budget, it ensures alignment of policies, initiatives and institutions through joint workplans, round tables, a regional assessment, joint trainings and cross-fertilization events, creating a large ripple effect for regional, national and local climate change adaptation.

Finally, this component provides the project a solid structure to institutionalize the adaptation process in a regional framework, where replication of lessons learned and the upscaling of local interventions is focused on effective and low-cost options, which benefit countries and communities in West Africa from a cost-effectiveness point of view.

Component 2. Strengthened role of national adaptation plans in the spatial planning practice at national and sub-national level and improved capacity of governments in adapting to cc.

The Probabilistic Risk Profile of Ghana indicates that the country losses 200 million dollars every year due to floods and droughts (UNISDR, 2018) while in Coté d'Ivore reaches up to $1.2 billion per year. (World Bank, 2019). The development of spatial and land use planning is considered to be one of the most cost-effective ways to understand and respond to climate change risks and vulnerability, especially to avoid future development in risk areas (and cost associated with this potential risk, such as destroyed homes, infrastructure and assets). By applying spatial planning tools at an early stage, governments and communities can anticipate and react in due time to challenges, with results into economic savings associated to prevention instead of reaction as well as social and environmental benefits.

Climate-proof territorial spatial planning reduces climate change vulnerability, providing decision-makers with the costs and benefits of adaptation options. Integrating social cost-benefit analysis in the different plans at the regional and municipal levels will allow to anticipate climate change impacts and assess the costs and benefits of climate-proof spatial planning. This will decrease the impacts of climate change induced risks into assets and infrastructure, providing a cost-effective way to reduce country losses due to extreme weather events and other prevalent risks.

Component 3. Municipal staff, communities and local stakeholders have successfully planned and implemented priority sub- projects to cope with climate-change related issues, such as sea level rise and floods, and access to climate-resilient livelihoods.

Regarding the subprojects, the design of the proposal aims to maximize the positive impacts for the communities. To achieve these positive impacts, the development of each physical adaptation strategy

through the community plans (3.1) will strengthen the effectiveness of the investment as it will be integrated within a community-based approach. This approach has been used across multiple cities and sectoral contexts and it has shown high cost-effectiveness compared to larger scale procurements, as it builds on community decision-making, local know-how and networks and facilitation, where the maximum value of each dollar is utilized to the maximum benefit of the community, in a transparent decision-making process. The specific trainings (3.3) that are planned to be implemented in the intervened areas will be delivered to communities that are in the climate frontline to increase their adaptive capacities, increasing their ability to withstand climate shocks and strengthening the management mechanisms for implementing and maintaining the adopted and further adaptation measures. Jointly to the community's role in the adaptation strategy, the supporting role of executing entities represents a key aspect of the projects´ cost-effectiveness. The role of executing entities will be focused in assessing communities and establishing working relations with them, to ensure that capacity gaps are covered. They will also play a key role to ensure ownership of the project by the communities and to contribute to the operation and maintenance of the projects that due to its specificities cannot be directly run by the community.

Besides that, whenever possible, the project will seek to achieve cost-effectiveness through economies of scale in procurement processes and contracts. The regional scale will facilitate those activities can be developed in the two countries to achieve economies of scale. The project will also seek to develop procurement and partnerships with governments and its agencies and the private sector to minimize project costs. Although the project aims to reduce cost of the execution of selected concrete interventions by pursuing economies of scale, the proposed community-level interventions will be scaled down to a size so that the interventions are manageable by communities. This is required to enhance ownership and sustainability of the project and to mitigate potential social and environmental risks. The project aims to select the interventions that benefit most communities and people.

Cost-effectiveness for subprojects of component 3

Table 9 Establishment of Early Warning Systems cost-effectiveness.

Subproject	Total subproject cost	Beneficiaries		Cost-effectiveness		Total cost-effectiveness (USD/Total Beneficiaries)
		Direct	Indirect	Direct (USD/ Beneficiary)	Indirect (USD/ Beneficiary)	
3.2.1 Establishment of Early Warning Systems	$1,533,500 USD	17,797	136,490	$86.00	$11.00	$9.94 USD
Viable Alternatives	**Assessment of alternatives (cost-effectiveness)**					
Business as Usual	If there are no actions taken in the Anloga/ Keta region and the coastal area of Coté d´ Ivoire, established communities will continue to be exposed to flood risks and sea level rise without having a strategy to prevent, respond and recover against climate change hazards. If no actions are taken, sea levels that could rise up to 1.2 meters in the Greater Bassam and Abidjan areas will progressively cause more severe and extensive impacts, increasing vulnerability and augmenting the damage costs and probability of life loss.					
High-technology Early Warning Systems	This type of EWS is connected to mobile phone carriers using internet and it provides geodata analysis of the region using GIS supported through on-line platforms. Although digital EWSs, considered high-technology systems, can have high rates of effectiveness for warning promptly to mobile carriers, the number of phone carriers with internet in the regions is minimal. These reduces the cost-effectiveness of the system as local communities don't have access to internet. In addition to this, high-tech EWSs require a higher cost of maintenance and specialized staff for technical support.					
Early Warning Systems adapted to local needs.	The selected Early Warning system has been strategically chosen by tailoring the technology (sirens, radio and SMS messages) to the technological context and adapting the system to the local knowledge and resources. Using technology adapted to the requirements of the communities can reduce implementation and maintenance cost as local community can be trained to give periodical maintenance to the system. Implementing an EWS while adopting risk assessment tools and quick response methodologies will minimize damage on infrastructure and reduce costs of reconstruction. EWS have a high level of acceptance in flood-risk communities, as beneficiaries are allowed to save livestock, movable belongings, and health costs (estimated at up to $1083 USD per household in Nepal Project[73]).					

Table 10. Integrated NBS for Urban flood adaptation cost-effectiveness

Subproject	Total subproject cost	Beneficiaries		Cost-effectiveness		Total cost-effectiveness (USD/Total Beneficiaries)
		Direct	Indirect	Direct (USD/ Beneficiary)	Indirect (USD/ Beneficiary)	
3.2.2 Integrated NBS for urban flood adaptation.	$1,464,522 USD	18,937	33,589	$77.00	$44.00	$27.88 USD
Viable Alternatives	**Assessment of alternatives (cost-effectiveness)**					

[73] COST-BENEFIT ANALYSIS OF FLOOD EARLY WARNING SYSTEM IN THE KARNALI RIVER BASIN OF NEPAL, Kumar Rai, Rajesh; van den Homberg, Marc J.C.; Prasad Ghimire, Gopal et al. https://www.preventionweb.net/publication/cost-benefit-analysis-flood-early-warning-system-karnali-river-basin-nepal

Business as Usual	Doing nothing represent a saving on construction and maintenance cost as no infrastructure is built to address floods, however selected communities are currently experiencing the damages of sea tides and rivers overflows, hindering communities' productivity and daily life activities, while reducing their wellbeing. Projected in a long-term scale, the costs of being impacted by climate change hazards such as floods and storm surges generate higher levels of economical loss and reduction of livelihoods.
Traditional drainage system	Pipe drainage systems are efficient for reducing water levels in settlements when a flood occur, nevertheless, they require high levels of investment as installation is expensive in comparison with low impact infrastructure. Traditional drainage systems have also low effectiveness for improving general landscape as they are not designed to reduce erosion, maintain biodiversity, address droughts, or stabilize other climatological occurrences. The lack of a comprehensive strategy for flood risk management can be reflected on low levels of return of investment when comparing to other solutions such as NBS.
Nature-based Solutions	Bioswales, rain gardens and seasonal biodetention facilities are capable of reducing financial investment on runoff-detention basis and traditional drainage systems. As NBS are designed to adapt to the environmental needs, green infrastructure multifunctionality provides more socio-economic benefits as it can be used for different purposes, (e.g., the detention basins during dry season can be used as urban spaces for integrating local activities). With NBS other costs of maintenance such as drainage maintenance costs or water treatment costs are reduced or limited. Research shows that NBS as low impact developments allow saving around 9.75% on-site preparation costs, 13.08% on stormwater management costs and 37.01% on landscape development costs in comparison with grey infrastructure. In general, NBS require low initial investment and medium investment on maintenance[74]. Nature-based solutions can also improve the water cycle dynamics by filtering water to the aquifers which eventually reduces the investment on water management practices.

Table 11. Mangrove restoration cost-effectiveness

Subproject	**Total subproject cost**	**Beneficiaries**		**Cost-effectiveness**		**Total cost-effectiveness (USD/Total Beneficiaries)**
		Direct	**Indirect**	**Direct (USD/ Beneficiary)**	**Indirect (USD/ Beneficiary)**	
3.2.3 Mangrove restoration	$1,785,339 USD	85,584	52,763	$21.00	$34.00	$12.90 USD
Viable Alternatives	**Assessment of alternatives (cost-effectiveness)**					
Business as Usual	Mangrove loss and high deforestation rates in the targeted areas have increased the impacts of climate change hazards such as sea and lagoon level rise and floods. If nothing is done to address these challenges, services provided by coastal ecosystems will be significantly reduced. These include lack of provisional services e.g., sustainable procurement of food (fish, shellfish) for sale or consumption and poor supporting ecological services in the region, reducing local biodiversity levels, and worsening ecological balance. Regulatory services to cope with climate hazards can diminish as well. The loss of regulatory services can increase coastal erosion and flood risk due to climate change hazards. If this happens, hundreds of meters of land can be lost, including houses, schools, and other public infrastructure which is reflected in millions of dollars loss.					
Construction of gray infrastructure	Gray infrastructure is commonly used as a hard strategy to protect against flooding from waves and coastal erosion, nevertheless, when implemented in isolation and without consideration of the environment, they are poorly effective for enhancing co-benefits provided by nature. To mention, armed concrete barriers and sandbags are capable of inducing instant adaptation benefits by reducing impacts of tidal waves and sea and lagoon level rise. Implementation costs can vary depending on the material and size of the barrier, (around USD 650-$2,000 per linear foot plus engineering services per site)[75], however, they have a short lifespan. Maintenance of these constructions increases the total life-cycle cost as they need to be partially or fully replaced over time due to natural erosion, making the intervention unsustainable and ineffective on a long-term scale. Moreover, this infrastructure does not enhance other co-benefits such as sustainable income-generating activities for improving communities' livelihoods nor strengthens ecosystem services to increase communities' adaptive capacity.					
Mangrove restoration	Overall cost-efficiency of mangrove restoration as an Ecosystem-based adaptation strategy is higher in comparison to the gray infrastructure alternatives that protect against flooding and restore erosive areas. Mangrove areas work as a buffer zone using vegetation and landforms, maintaining integrity of shorelines. In addition, mangrove restoration can also provide other ecosystem services provisioning food (mollusk harvesting and fisheries), supporting local ecological services and delivering regulation services (climate and flood regulation, water purification, carbon sequestration) that will strengthen communities' livelihoods. Once all ecosystem services are considered, mangrove restoration has a high cost-effectiveness obtaining benefit-cost ratios from 10.50 to 6.83 under discount rates of -2% to 8%[76]. In addition to this, the sequestration capacity of mangrove planted in the current project can generate minimum revenue values of $14,098.55 USD/tCO2/year or a maximum of $65,788.82 USD/tCO2/year, depending on the carbon offset price in the market[77].					

Table 12. Climate-resilient agriculture cost-effectiveness

Subproject	**Total subproject cost**	**Beneficiaries**		**Cost-effectiveness**		**Total cost-effectiveness (USD/Total Beneficiaries)**
		Direct	**Indirect**	**Direct (USD/ Beneficiary)**	**Indirect (USD/ Beneficiary)**	
3.2.4 Climate-resilient agriculture	$ 2,588,414 USD	2,160	1,080	$1,198.00	$2,397.00	$798.89 USD
Viable Alternatives	**Assessment of alternatives (cost-effectiveness)**					
Do nothing	Salinity surface and levels will continuously increase as data has shown for the last three decades, this is mostly due to inefficient irrigation systems, exploitation of underground water and intrusion of sea water to the aquifers. If these conditions persist in the Anloga/ Keta District, livelihoods loss will increase; by decreasing agricultural productivity and food security, limiting access to drinkable water, and increasing poverty rates.					

[74] Reducing Stormwater Costs through Low Impact Development (LID) Strategies and Practices, December 2007, EPA 841-F-07-006
[75] Sea Wall Guide: What Are the Advantages and Disadvantages? (greencoast.org)
[76] A meta-analysis of the ecological and economic outcomes of mangrove restoration | Nature Communications
[77] AF - Carbon sequestration calculations - Documentos de Google

Improved agriculture management	Improved agriculture management is focused on using soil fertilizers (organic matter) for improving agriculture soils conditions. This strategy has been implemented in several regions of Ghana with high levels of salinity, however, the return of investment has been minimal and unsuccessful to curb rising salinization. The implementation of best practices for improving agriculture yield would be partially improved, however, the process of adaptation to saline soils without using halophytes (salt-resistant crops) and without using water infiltration systems is not cost-effective.
Climate-resilient agriculture	The climate-resilient agriculture intervention will include a socio-economic analysis that guarantees high levels of costs-effectiveness considering the business models that are currently settled in the area and the adjustments to improve them, considering the yields and the harvesting seasons. The introduction of salt-resilient crops and the implementation of a holistic approach for resource management will increase the cost-effectiveness of the subproject. Income generation is expected to increase by 20 to 35% in the first two years of adopting the strategy.

PART II.E. CONSISTENCY WITH NATIONAL OR SUB-NATIONAL STRATEGIES

The proposed project is supporting reaching Ghana and Côte d'Ivoire goals under the SDGs, particularly by contributing to the progressive achievement of **SDGs 6, 11, 13, 14 and 15.** Furthermore, the project has direct linkages with the implementation of the New Urban Agenda as it promotes integrated and participatory approaches involving all relevant stakeholders and all inhabitants, especially people in vulnerable situations and both genders, avoiding spatial and socio-economic segregation and gentrification, while preserving cultural heritage, protecting the environment and preventing and containing urban sprawl and climate hazards. Its objectives align as well with the Paris Agreement, particularly on articles 2, 7, 8, 11, 12, by aiming to strengthen resilience and the response to the threat of climate change, in the context of sustainable development and to eradicate poverty and reduce vulnerability.

The project is also in line with the 4 Domains of Changes of UN-Habitat Strategic Plan 2020-2023 and the flagship Programme 3: RISE UP: Resilient Settlements for the Urban Poor, by tackling issues of poverty, spatial inequality and resilient settlements (see below). The following domains of change and subdomains link to the outputs of the project.

DoC1: Reduced spatial inequality and poverty in communities across the urban – rural continuum (2.1,2.2)
DoC2: Enhanced shared prosperity of cities and regions (1,3, 2.2)
DoC3: Strengthened climate action and improved urban environment (1.1,1.2)
DoC4: Effective urban crisis prevention and response (3.1,3.2,3.3)
Flagship Programme 3: RISE UP: Resilient Settlement for the Urban Poor

Ghana

The project will help achieving the goals of Ghana's Intended Nationally Determined Contribution 2015 (INDC) which is based on Ghana's Shared Growth Development Agenda II, the 40-year socio-economic transformational plan and the National Climate Change Policy (2013). The project will focus on building climate resilient strategic infrastructure, which is identified as a strategic area for policy action in the INDC. More specifically, it addresses the objectives, strategies and priority actions specified by the National Climate Change Adaptation Strategy from 2012. The different components will focus on the areas prioritised by the National Climate Change Policy (2013), also supporting and giving continuation to Ghana's Plan of Action on Disaster Risk Reduction and Climate Change Adaptation (2011/2015). The components of the proposed project will support activities of the plan such as ensuring regional, national and local coordination; identification and assessment of disaster risks; use knowledge, innovation and education to build culture of safety and resilience; and reinforcing land-use planning and other technical measures to build resilience. Ultimately, the project will leverage the achievements of the National Adaptation Plan Framework 2018 (NAP) process established under the UNFCCC. In relation to sustainable urban development of cities and towns the project will be aligned with the National Urban Policy Framework (2012) and Action Plan and be consistent with the National Spatial Development Framework 2015-2035 and the

pertinent Regional Spatial Development Frameworks, District Spatial Development Frameworks, structure plans and local plans.[78]

In the National Spatial Development Framework 2015-2035 more issues and challenges are identified, such as the need for environmental protection and conservation, more sustainable development in the coastal zones and shift from the urban sprawl trend. The project will aim at tackling these challenges as well as promoting proposed strategies, like urbanisation as a driver for economic growth and poverty reduction. These issues are not only a concern at national level but also at regional level. The Greater Accra Spatial Development Framework also showcases population growth, open space degradation and urban sprawl as problems and aims at a more sustainable, liveable and safe region.

Ultimately, through improved development planning the project will assist on maintaining the ecological integrity of wetlands and other ecosystems, guiding on healthy development practices, integrating environmental considerations in sectoral structural planning, and facilitating a more efficient use of natural resources. This approach is directly aligned to main needs and issues described in the Coastal Wetlands Management Plan and the Environmental Action Plan.

Other relevant strategies are:

- Nationally Appropriate Mitigation Action
- Ghana's First (2002), and Second (2006) National Communications to the UNFCCC
- Climate Change Technology Needs Assessment (2003)
- Ghana Climate Change Impacts, Vulnerability and Adaptation Assessments (2008)
- The Clean Development Mechanism
- Ghana´s National Disaster Managament Plan

Cote d' Ivoire:

The project will work on several of the most relevant national challenges and will be aligned with strategies from the INDC, the National Adaptation Plan, the National Environment Action Plan, the National du Développement Durable en Côte d'Ivoire dans la perspective de Rio+20, the National Development Plan 2016-2020 and 2021-2025 (and the United Nations Sustainable Development Cooperation Framework (UNSDCF) 2021-2025, to ensure alignment of the UN System with the UNSDCF), and the Programme National Changement Climatique 2015-2020. Regarding risk reduction, the main document the project will be aligned with is the Stratégie Nationale de Gestion des Risques de Catastrophes & Plan d'Action and the Cadre National des Services Climatiques. The project will support initiatives from these plans such as: improvement of disaster risk reduction and coastal areas management, elaboration of a coastal adaptation strategy, build active protection structures, ecosystems restoration, better management of natural resources, and consolidation of co-operation links between Cote d' Ivoire, the West African region and the international community. The project will also leverage the achievements of the National Adaptation Planning (NAP) process established under the UNFCCC. In relation to development the project will be aligned with the Plan National de Developpement 2016-2020 and the Territorial Development Policy Framework (2006).as well as the pertinent development schemes and plans.

Regarding spatial development, at the national scale the project will be aligned with the key actions of the Territorial Development Framework adopted in 2006. This document sets a legal framework for central and local development. It ensures coherence between country, urban and sector infrastructure plans, and links national objectives with regional planning, through a participatory development process. At the district scale, the project for the Development of the Urban Master Plan in Greater Abidjan remarks managing pressure for urbanization, urban sprawl, and planning for population growth and competing land-uses, as key planning issues

[78] As described in the National Urban Policy Framework of Ghana (2012)

in the area. The document raises the concern of the continuous degradation of the environment that will take place if these issues are not tackled. This degradation will keep evolving in loss of natural forest and biodiversity assets, low quality living, increasing pollution etc. The project will align with this Plan by addressing these challenges through the different components, aiming at a more sustainable and resilient urban area. Ultimately, the project approach strongly supports the strategic assets described in the Plan National de Développement 2016-2020, such as accelerating the development of human capital and social well-being, development of infrastructure harmoniously over the national territory and preservation of the environment and strengthening regional integration and international cooperation.

For a detailed overview of project alignment with national and sub-national strategies, see Annex 7.

PART II.F COMPLIANCE WITH RELEVANT NATIONAL TECHNICAL STANDARDS

For the national and regional outputs described in Components 1 and 2, the project will take into consideration applicable regional and international frameworks, in consultation with Abidjan Convention. Activities that fall under these components are not subject to technical standards due to their implementation in a regional and national scope. In addition to these, components 1 and 2 do not integrate physical interventions that need to follow specific technical requirements for their execution.

In developing component 3 of this project, an analysis of relevant national standards was undertaken. The findings of the analysis are summarized in the tables below and reflected in the risks screening belonging to the ESMP (see risk screening regarding principle 1, law compliance, under Part II, Section L, Annex 6). The project complies with the Environmental and Social Policy and the Gender Policy of the Adaptation Fund. During preparation of the full proposal, a detailed risk screening and impact assessment of all project activities was undertaken (see a summary in Part II, Section L and details in Annex 6).

Major national standards worth highlighting due to its relevance to the overall project are labour laws, which will be complied for all employment contracts. More specifically, no activities of the project will be initiated without ensuring that the national legislations are applied for construction activities entailing infrastructure interventions in Component 3. Applicable laws are:(i) for Côte d'Ivoire Loi n°95/15 du 12 janvier 1995; (ii) for Ghana The Labour Act No 651 of 2003.

During the implementation of activities, the National Project Managers (see their role in Part III Section A) will ensure that all project activities comply with existing national technical standards. At the beginning of the project, when the sub-project implementation plans are fully developed with communities and municipalities, including detailed engineering studies, the necessary steps to comply with these standards will be detailed in addition to what is described for each country/city below.

Côte d'Ivoire:

The 2016 constitution of Côte d'Ivoire ensures the protection of the environment and sets the implementation rules. The detailed regulations for the EIAs are described in Decree No. 96-894 of November 8, 1996 determining the rules and procedures applicable to studies relating to the environmental impact of development projects. ANDE is responsible for formulating sectoral directives and implementing ESIA procedures. It has developed guides for the industry, energy, agriculture, transport and infrastructure sectors.

The integration of EIAs in the project cycle is essential for providing environmental information at key stages. Early results of an EIA may indicate practical design changes that would avoid

or reduce adverse environmental impacts or better benefit from environmental benefits. A screening procedure is carried out by the Ministry of the Environment, who makes the decision to approve the project and determines if the sub-project must be subject to an EIA or not. In this case, mangrove restoration and urban flood resilience interventions require an EIA, therefore, a comprehensive report has been integrated including the assessment of both subprojects so as for the establishment of Early Warning Systems and Climate-resilient agriculture practices. The table below presents all the relevant legislation, compliance, and mitigation measures adopted.

Table 13. Côte d'Ivoire ESIA Table

Sub-projects	Relevant rules, regulations, standards and procedures	Compliance, procedure, and Authorizing entity
Mangrove restoration along the coast in Grand Bassam and Jacqueville	Decree No. 2012-988 of October 10, 2012 establishing, attributing, organizing and operating the National Platform for Risk Reduction and Disaster Management. Law No. 96-766 of 3 October 1996 on the Environment Code; Law No. 2019-675 of July 23, 2019 on Forestry Code Law 98-755 of december 23, 1998 on Water Code Law No. 2003-208 of july 7, 2003 on the transfer and distribution of competence from the State to local authorities (in the field of environmental protection and management of natural resources) Decree 94-368 of July 1st 1994, aimed at improving the management of forestry operations, enhancing the value of wood resources through wood processing, rehabilitating the forest area through reforestation activities and cleaning up the profession of forestry operator.	An EIA is required, and it was submitted to the National Agency of Environment Protection (ANDE). No obstacles are foreseen to obtain an authorization, as proposed intervention has been discussed with and agreed by authorities. The Ministry of Environment and Sustainable Development (MINEDD) has given advice and will monitor the intervention according to its impact on environment at all stages of the intervention. The Ministry of Water and Forestry will foresee technical support during implementation, including the validation of selected sites and choices of plant species so as compliance of technical standards. Supervision and technical validation of the creation of nurseries and planting will be done by experts from the Ministry of Water and Forestry. The implementation will be supervised by the local directions of the forestry and environment administration. The Ivorian Anti-pollution Centre (CIAPOL) through the Directorate of the Inspection of Classified Installations (S/DIIC) will oversee monitoring the level pf pollutions of water and soil so as to ensure compliance with technical provisions for the development of the subproject.
Urban flood resilience in Côte d'Ivoire.	Decree No. 2012-988 of October 10, 2012, establishing, attributing, organizing, and operating the National Platform for Risk Reduction and Disaster Management. Law No. 2017-378 on development, protection and integrated management of the coastline littoral promulgated the 2nd of June 2017. Decree No. 96-894 of November 8,1996 determining rules and procedures applicable to studies related to the environmental impact of development Law No. 96-766 3 October 3, 1996, on the Environment Code. Law 98-755 of december 23, 1998 on Water Code Decree No. 990 / PMMD / CAB / of October 21, 2011 establishing the Interministerial Committee for Coastal Erosion Control Decree No. 97-678 of December 3, 1997, on the protection of the marine and lagoon environment against pollution. Law No. 2019-576 of June 26, 2019, establishing the Construction and Housing Code (JO 2019-61)	The National Agency of Environment Protection (ANDE) and the Ministry of Environment and Sustainable Development (MINEDD) through the National Coastal Management Agency (Agence Nationale de Gestion du littoral cotier) has given advice and will monitor the intervention (compliance of technical standards) according to its impact on environment at all stages of the intervention. The assessment of this subproject is included in the EIA. The Ministry of Construction, Housing and Urban Planning (MCLAU) which is in charge of granting construction permits will validate the sites for construction in agreement with the communities. Technical guidance is required from the National Meteorological Service SODEXAM which can validate zoning risk areas where NBS for urban flood resilience can be implemented. The Ivorian Anti-pollution Centre (CIAPOL) through the Directorate of the Inspection of Classified Installations (S/DIIC) will be in charge of monitoring the level pf pollutions of water and soil so as to ensure compliance with technical provisions for the development of the subproject.
Establishment of early warning systems	Law No. 2017-378 on development, protection and integrated management of the coastline littoral promulgated the 2 June 2017 Decree No. 96-894 of November 8, 1996, determining rules and procedures applicable to studies related to the environmental impact of development Decree No. 2012-988 of October 10, 2012, establishing, attributing, organizing and operating the National Platform for Risk Reduction and Disaster Management. Decree No. 2005-263 of July 21, 2005, fixing in terms of civil protection, the modalities of application of Law 2003-208 of July 7, 2003.	The National Agency of Environment Protection (ANDE) and the Ministry of Environment and Sustainable Development (MINEDD) through the National Coastal Management Agency (Agence Nationale de Gestion du littoral cotier) must give advice and monitor the intervention (compliance of technical standards) according to its impact on environment at all stages of the intervention following law° 96-766 du 3 octobre 1996 portant Code de l'environnement. Even that an EIA is not required for this subproject as it doesn't represent a considerable risk for the environment and the communities, the subproject assessment is included in the general EIA of the project. Validation and technical guidance will be required from the Ministry of Construction, Housing and Urban Planning (MCAU) which is in charge of granting construction permits. Validation and implementation must be followed in accordance with the requirements stablished by the national meteorological service SODEXAM, dependent on the Ministry of Economic infrastructure. The implementation will be supervised by the local directions of the environment administration.

Climate-Smart Agriculture	Law No. 2015-537 of July 20, 2015 on the agricultural orientation of Côte d'Ivoire. Law No. 97-721 of December 23, 1997 on cooperatives Law No. 95-893 of October 27, 1995 on rural communities Decree No. 98-257 of June 3, 1998 on the implementation of Law No. 97-721 of December 23, 1997 on cooperatives Law No. 64-490 of 21 December 1964 on plant protection. Decree No. 92-392 of july 1st, 1992 on the Registration and Protection of Plant Varieties, Production and Marketing of Seeds and Seedlings. Decree No. 89-02 on the approval, manufacture, sale and use of pesticides. Decree No. 2013-678 of 2 October 2013 establishing the national catalogue of plant species and varieties cultivated in Côte d'Ivoire. Interministerial Order No. 509/MINAGRI/MEMIS of November 11, 2014 organizing the control of pesticides, the inspection and sanitary, phytosanitary and quality control of plants, products of plant origin, agricultural products and any other material likely to carry pests for crops, human health and animals at the gates of entry and exit of the national territory. Decree No. 2013-441 of June 13, 2013, determining the conditions and modalities of classification and downgrading of water resources, hydraulic facilities and works as well as granting the regime of public utility to water resources, hydraulic facilities and works.	An EIA is not required for this subproject as there are no environmental impacts in the agriculture land that is going to be intervened Climate smart practices will be delivered in already established plots in peri-urban regions. Despite this, the subproject assessment is included in the general EIA of the project. The Ministry of Environment and Sustainable Development (MINEDD) has given advice and will monitor the intervention (compliance of technical standards) according to its impact on environment at all stages of the intervention. The Ministry of Agriculture and Rural Development will validate the project. Monitoring of the activities will be followed by the Ministry to align the outcomes with the national and regional plans for agriculture development. Regarding water consumption for agriculture purposes, the activities will follow decree 2013-441 considering all the conditions and modalities for water consumption. The utilisation of hydrological resources within the project area for irrigation will be controlled by this regulation and all the necessary water use rights would have to be secured in future especially where abstraction from the water bodies for agriculture becomes necessary.

Ghana

Environmental Impacts Assessments in Ghana are carried out based on The Environmental Protection Agency Act, 1994 (ACT 490), and the Environmental Assessment Regulations, 1999. The integration of EIAs in the project cycle is essential for providing environmental information at key stages. Early results of an EIA may indicate practical design changes that would avoid or reduce adverse environmental impacts or better benefit from environmental benefits. A screening procedure carried out by the government determines if the sub-project must be subject to an EIA or not (also called Environmental and Social Management Framework). Further to this, Mangrove restoration and Urban flood resilience interventions require an EIA, therefore, a comprehensive report has been integrated including the assessments of both subprojects so as for the establishment of Early Warning Systems and Climate-resilient agriculture practices. The table below presents all the relevant legislation, compliance, and mitigation measures adopted.

Table 14. Ghana ESIA Table

Sub-Projects	Relevant Rules, Regulations and Standards	Compliance, Procedure and Authorising Entity
Mangrove restoration	Environment Protection Act, Act 490, 1994; Environmental Assessment Regulation 1999 (LI 1652); Local Governance Act, 2016 (Act 936) National Wetlands Conservation Strategy Wetlands Management (RAMSAR site) Regulation 1999 Pesticides Control and Management Act (1996) Act 528 Ghana Standards for Environmental and Health Protection – Requirements for Ambient Air Quality and Point Source/ Stack Emissions (GS 1236, 2019) Ghana Standards for Health Protection- Requirements for Ambient Noise Control (GS 1222, 2018) Ghana Standards for Environmental and Health Protection- Requirements for Effluent Discharge (GS 1212, 2019)	An Environmental Permit is required from the Ghana EPA before commencement of project implementation. The procedure starts with the completion of EA1 Registration Form (One form for all subprojects) and screening by the EPA. UN-Habitat has already initiated the permit process. The project requires the preparation of the Environmental and Social Management Framework (ESMF) which must be sent to the EPA (One ESMF for all subprojects). A processing and permit fees to be paid before issuance of the permit. A draft ESMF has already been prepared and submitted for the consideration of the Ghana EPA. Comments for finalization have been received and are being addressed for finalization of the report and final issuance of the permit on payment of permit fees. An authorisation (Development and Building permit) has been requested from each District (Ada East; Ada West and Anloga/ Keta Municipal Assembly). The Ministry of Environment, Science, Technology and Innovation and the Land Use Spatial Planning Authority (LUSPA) will follow compliance of technical standards.

Urban flood resilience in Ghana.	Environment Protection Act, Act 490, 1994; Environmental Assessment Regulation 1999 (LI 1652); Local Governance Act, 2016 (Act 936) Lands Commission Act 2008 act 767 National Wetlands Conservation Strategy Wetlands Management(RAMSAR site)Regulation 1999 Riparian Buffer Zone Policy, 2011 Ghana Standards for Environmental and Health Protection – Requirements for Ambient Air Quality and Point Source/ Stack Emissions (GS 1236, 2019) Ghana Standards for Environmental and Health Protection- Requirements for Effluent Discharge (GS 1212, 2019) Part 1: Membrane filtration method for waters with low bacterial background flora GS ISO 9308-1:2021 Ghana Standards for Health Protection- Requirements for Ambient Noise Control (GS 1222, 2018) National Disaster Management Organization (*NADMO*) *Act* 927 National Disaster Management Plan (2007) National Standard Operating Procedures for Emergency Response (2010) Ghana Plan of Action Disaster Risks Reduction and Climate Change Adaptation (2011-2015) National Contingency plan (NCP) for Emergency Prepared and Response.	An Environmental Permit is required from the Ghana EPA before commencement of project implementation. The procedure starts with the completion of EA1 Registration Form (One form for all subprojects) and screening by the EPA. UN-Habitat has already initiated the permit process. The project requires the preparation of Environmental and Social Management Framework (ESMF) which has to be sent to the EPA. A processing and permit fees to be paid before issuance of the permit. A draft A draft ESMF has already been prepared and submitted for the consideration of the Ghana EPA. Comments for finalisation has been received and are being addressed for finalisation of the report and final issuance of the permit on payment of permit fees. The Ministry of Environment, Science, Technology and Innovation and the Land Use Spatial Planning Authority (LUSPA) will follow compliance of technical standards.
Establishment of early warning systems	Environment Protection Act, Act 490, 1994; Environmental Assessment Regulation 1999 (LI 1652); Local Governance Act, 2016 (Act 936) Lands Commission Act 2008 act 767 National Wetlands Conservation Strategy Wetlands Management (RAMSAR site) Regulation 1999 Protection against lightning- Part 2: Risk management GS IEC 62305-2:2013 Risk Assessment Of Damages To Telecommunication Sites Due To Lightning Discharges GS ITU-T K 39:2011 National Disaster Management Organization (*NADMO*) *Act* 927 National Disaster Management Plan (2007) National Standard Operating Procedures for Emergency Response (2010)	An Environmental Permit is required from the Ghana EPA before commencement of project implementation. The procedure starts with the completion of EA1 Registration Form (One form for all subprojects) and screening by the EPA. UN-Habitat has already initiated the permit process. The project requires the preparation of Environmental and Social Management Framework (ESMF) which has to be sent to the EPA. A draft ESMF has already been prepared and submitted for the consideration of the Ghana EPA. Comments for finalisation has been received and are being addressed for finalisation of the report and final issuance of the permit on payment of permit fees. An authorisation (Development and Building permit) has been requested from each District (Ada East; Ada West, Anloga/Keta). The National Disaster Management Organisation (NADMO) will be validating the activities related to the EWA through the Climate Change and Disaster Risk Reduction Department and the Hydrometeorological Disasters' Department. Project must follow implementation in accordance with the Regional Platforms for DRR. The Ministry of Environment, Science, Technology and Innovation and the Land Use Spatial Planning Authority (LUSPA) will follow compliance of technical standards.
Climate-resilient agriculture	Environment Protection Act, Act 490, 1994; Environmental Assessment Regulation 1999 (LI 1652); Local Governance Act, 2016 (Act 936) Lands Commission Act 2008 act 767 National Wetlands Conservation Strategy Wetlands Management (RAMSAR site) Regulation 1999 Pesticides Control and Management Act (1996) Act 528 Plants and Fertilizer Act 2010, Act. 803. Water Use Regulations, 2001, LI 1692 Ghana Standards for Environmental and Health Protection – Requirements for Ambient Air Quality and Point Source/ Stack Emissions (GS 1236, 2019) National Ambient Noise Level Standards (GS 1222, 2018) Ghana Standards for Environmental and Health Protection- Requirements for Effluent Discharge (GS 1212, 2019)	An Environmental Permit is required from the Ghana EPA before commencement of project implementation. The procedure starts with the completion of EA1 Registration Form (One form for all subprojects) and screening by EPA. UN-Habitat has initiated the permit process. The project requires the preparation of Environmental and Social Management Framework (ESMF) which has to be sent to the EPA. A draft ESMF has already been prepared and submitted for the consideration of the Ghana EPA. Comments for finalisation has been received and are being addressed for finalisation of the report and final issuance of the permit on payment of permit fees. An authorisation (Development and Building permit) has been requested from each District (Ada East; Ada West and Anloga/ Keta Municipal Assembly). The Wildlife Division from the Forestry Commission has given advice and will be monitoring technical compliance during implementation. The Water Resources Commission is responsible for the execution of the Water Use Regulations. Subject to the Water act, a person may obtain a permit from the Commission for agricultural water use. The utilisation of hydrological resources within the project area for irrigation will be controlled by this regulation and all the necessary water use rights would have to be secured in future especially where abstraction from the water bodies for agriculture becomes necessary. Compliance with air, noise and effluent quality standards will be incorporated into the EPA permit schedule for adherence. No separate permit required. The Ministry of Environment, Science, Technology and Innovation and the Land Use Spatial Planning Authority (LUSPA) will follow compliance of technical standards.

PART II.G DUPLICATION WITH OTHER FUNDING SOURCES

Table 15. Relevant projects, lessons learned and complimentary potential

Relevant projects/programme, executing entity and budget	Lessons learned (relevant for proposed interventions)	Complimentary potential And non-duplication
West/East Africa		
West Africa Coastal Areas Management Programme (WACA)[79] - WB 2015 – US$300 m Three pillars Strategic investment planning; Knowledge, information, and capacity building; Country and regional engagement and resource mobilization.	There is strong political support in Côte d'Ivoire Process is slower in Ghana – multi-sector risks assessment still to be finalized	Complementary WACA suggested to cooperate on strengthening the spatial planning component in Grand-Lahou Knowledge sharing on coastal management in West Africa Coastal Areas There is clear will to coordinate and share lessons learned WACA suggested to consider working together on coordinate on the multi-sector assessment in Ghana Non-Duplication A part from the collaboration on Grand-Lahou, the project focuses on different target areas
West Africa biodiversity and climate change (WA-BICC) – USAID. (2015-2020) WA-BiCC will address both direct and indirect drivers of natural resource degradation to improve livelihoods and natural ecosystems across the region.	Initiation stage (vulnerability assessments so little lessons learned)	Complementary Lessons learned and collaboration on their programme objective 2 Non-Duplication WA-BICC project focuses on Sierra Leone and West coast of Côte d'Ivoire; Not common target areas
Mami Wata project[80] - by GRID-Arendal and the Abidjan Convention Secretariat	Started in 2016 so no lessons learnt reported yet	Complementary The project will complement their capacity building initiative on coastal ecosystems protection and conservation Non-Duplication The project will address resilience through a different sector: urban and territorial planning as a tool for climate change adaptation
Transboundary projects climate-resilient Ministry of Environmental and Sustainable Development 2016 African climate Change Fund (ACCF)	No lessons learned yet, ongoing project	Complementary The project complement climate resilience in different regions of the Abidjan-Lagos coastal corridors Enhances knowledge and capacity, facilitating partnerships for climate-proofing African infrastructure projects. Non-Duplication Non geographical overlap regarding infrastructure projects; the ACCF project works in Togo Benin Zambia and Zimbabwe
Scaling up climate-smart agriculture In East Guinea Bissau AF / BOAD	No lessons learnt yet	Complementary Both projects work on increasing resilience to climate change Lessons learnt and knowledge sharing from interventions on extremely vulnerable groups (women, elderly and children) Non-Duplication Non geographical overlap The Guinea project mainly focus on agriculture and farming sector
Reducing vulnerability and increasing resilience of coastal communities in the Saloum Islands (Dionewar), Senega AF	No lessons learnt yet	Complementary Both projects work on coastal erosion management and flooding Knowledge sharing from interventions that aim at tackling same challenges

[79] http://www.worldbank.org/en/programs/west-africa-coastal-areas-management-program
[80] https://mamiwataproject.org/

		Non-Duplication Non geographical overlap
Reducing Vulnerability to Climate change in North West Rwanda through Community Based Adaptation AF / Ministry of Natural Resources (MINIRENA)	The project relocated 200 households from high risk zones after being affected by flooding and landslides. Create off-farm jobs and generate income	Complementary The project can incorporate lessons learnt from this project regarding erosion and flood control measures Non-Duplication Non geographical overlap
Enhancing resilience of communities to climate change through catchment-based integrated management of water and related resources in Uganda AF	No lessons learnt yet	Complementary Knowledge sharing regarding water management and flood control Non-Duplication Non geographical overlap
Least Developed Countries Fund project. Liberia. UNDP GEF funding	Strengthening Liberia's capacity to provide climate information and services to enhance climate resilient development and adaptation to climate change. The private sector can be involved but other outputs of the project should not depend on it.	Complementary The project will make use of the improved climate database and archives developed by the LDCF project. The project will complement the LDCF capacity building on climate change mainstreaming in other countries in the region. Non-Duplication Non geographical overlap: The LDCF project will be implemented in 10 countries: Benin, Burkina Faso, Ethiopia, Liberia, Malawi, Sao Tomé and Principe, Sierra Leone, Tanzania, Uganda and Zambia. The project will not focus on generating databases nor implementing early warning systems.
Adaptation to Coastal Erosion in Vulnerable areas in Senegal AF	Reduce exposure of vulnerable communities to coastal erosion through physical interventions, policies and regulations.	Complementary The project will apply the lessons learnt from this project regarding involvement of local communities and technical knowledge from interventions that aim at tackling same challenges. Non-duplication No geographical overlap
Projet Régional d'Investissement pour la Résilience des Zones Côtières d'Afrique de l'Ouest 2017 ResiP-WACA, BM et Partenaires	Project still on-going	Complementary The project also has the objective of improving risk management by mainstreaming climate change. Non-duplication No geographical overlap on interventions investment. The project focusses on the city of Grand-Lahou and certain surrounding villages, in particular from Lahou-Kpanda; Ekpossa; Likpiassie; Groguida; Noumouzou; Old Braffedon; Braffedon new and N'zida Zoukouboli

Relevant projects/programme, executing entity and budget	Lessons learned (relevant for proposed interventions)	Complimentary potential And non-duplication
Ghana		
Ghana-Netherlands Universities Volta Delta Design Project Delta Alliance Ghana Wing	Focus on sustainable management of the Volta Delta including coastal engineering, policy, institutions and livelihoods.	Complementary Delta Alliance will cooperate also on the urban lab Ongoing collaboration: Ghana Delta Wing / The Development Institute / students conducted the community assessments The project will maximize the use of findings from Delta Alliance Both projects will complement on transboundary strategies Non-Duplication The Volta Delta Design Project work with upstream communities of rivers Tordzie and Kplikpa (Blikpa); which are not included in our target areas
Global Alliance for Green and Gender Advocacy This project is in its second phase of building capacity for gender and environmental justice community organizations to better	Find ways to Empower community gender and environmental justices' groups	Complementary The project works with the Development Institute to make use of their gender approach Non-Duplication

engage duty bearers on sustainable management of the Keta Lagoon Complex Ramsar site Both ENDS/MoF Netherlands and the Development Institute		Both projects have different core objectives, GAGGA is focused on women empowerment at decision-making level. UN-Habitat project will make use of this gender advocacy as an input on the resilience strategies
Economic Empower of Women and Youth Both ENDS/Global Green Grants/ Women 2030 and The Development Institute	Skills training in soap making and reed weaving into bags etc. and setting up of Village Saving and Loans Association have shown to be successful	Complementary The project works with the Development Institute to empower women and youth and to promote gender equality Non-Duplication The Development Institute project focuses mainly on women empowerment training and skills training, no spatial planning are included.
Enhancing community food security through management of saline soils Salt Farm Texel, Netherlands/ Crop Science Dept. Univ. of Ghana and The Development Institute	Initial feasibility done for a potential area to manage soil salinity and introduce salt resistant vegetable/crops but no funding secured yet.	Complementary The project will use findings and work together with the Development Institute to enhance the management of saline soils and water Non-Duplication Both projects have different thematic area of focus
Community conservation & pro-poor tourism Project Wildlife conservation in Ada and Anloga/ Keta Calgary Zoo/ DI and The Development Institute	Eggs of turtles also affected by erosion; therefore, they try to monitor erosion in Ada and Anloga/ Keta Protection of Turtles and whales, Manette, Sitatunga) through Marine protection area (MPA) concept and livelihood/ tourism	Complementary The project will identify hotspot areas along with the Development Institute and Wildlife conservation and align efforts UN-Habitat will work together with the development institute and Wildlife conservation to monitor coastal erosion and enhance livelihood options
Livelihoods and community management systems The Development Institute / IUCN-NL/Both Ends	TEEB studies Coastal communities ready to engage in building resilience for themselves through setting of community conservation areas and planting of mangroves	Complementary The project will work with the Development Institute to ensure areas for safe haven in times of disaster are zoned out Non-Duplication Both projects have different focus; conservation and designation of safe havens.
Sustainable Delta Management The Development Institute and Delta Alliance	Assessment of the Volta delta (Current doc) The need for Adaptive Delta Management and a governance and management system for the Volta Delta	Complementary The project would be working with the Development Institute to implement adaptive management through land use Spatial planning Non-Duplication Both projects have different focus; land use and spatial planning and delta management.
Sustainable Land and Water Management Project in Ghana[81] - WB (2014 -)	Still on-going	Complementary Lessons learned from improved sustainable land and water management practices will be incorporated into the approach of the project Non-Duplication The project will focus on spatial planning at large scale which is not included in the WB project The WB project has a different target area: Northern Savannah region
Integrating Flood and Drought Management and Early Warning for Climate Change Adaptation in the Volta Basin[82] - WMO Not yet started	At pre-concept note phase so no lessons learned	Complementary Knowledge sharing on long-term Environmental development Non-Duplication The project will not focus on implementing early warning systems The WMO project does not address coastal resilience

[81] http://projects.worldbank.org/P132100?lang=en
[82] https://www.adaptation-fund.org/wp-content/uploads/2017/08/Pre-concept-AF-Volta-Basin-v5-18092017.pdf

Increased Resilience to Climate Change in Northern Ghana through the Management of Water Resources and Diversification of Livelihoods[83] - UNDP / AF 2016 - 2020	At start-up phase. Project will monitor lessons learned regarding livelihoods	Complementary Knowledge sharing regarding water management in Ghana Both projects will support different regions in Ghana on building climate change resilience Non-Duplication The project will focus on Southern areas not included in the UNDP/AF proposal The project will address resilience through a different sector: urban and territorial planning as a tool for climate change adaptation
UN-Habitat National Priority Planned City Extension in the Greater Accra Region	Strategic Development Framework for the physical plan for the extension of the urbanized area inside Ningo-Prampram District	Complementary The project will support inputing coastal erosion and climate change impacts in plan for the coastal area of the Ningo-Prampram District Coordination to align resilient development strategies Non-Duplication The city extension project only focuses on Ningo-Prampram District
Accra on the Greater Accra Resilient and Integrated Development (GARID) project	Focus on Odaw basin in Accra Metropolitan area where 200 people died due to floods Most of the floods are caused by a combination of high tide and increased discharge. Erosion of lagoons and settlements does not only occur from the sea side but also from the river side	Complementary The project will use assessed hotspot mapping and hydrologically modelled of all basins in GA-region and flood hazard and risk maps for the spatial plans. Non-Duplication The project will not include Odaw basin as a target area
Ghana Government Livelihood Empowerment Against Poverty (LEAP) Programme	Cash-outs can help the most vulnerable, but drug use is difficult to change	Complementary Map all areas where the government (plans) to intervene and cooperate Consider cash for work approach for certain interventions Lessons learned from enhanced livelihood options of vulnerable groups will be integrated Non-Duplication The project will address poverty through a different mechanism, urban and territorial planning
Sustainable fisheries project USAID and Hen Mpoano	Effective stakeholder engagements through one-on-one discussions and focus group discussions promotes high participation. Effective stakeholder engagements through communication (peer to peer discussion, study tour, focus group discussions) enhance behavioural change communication. Ownership is key to project success.	Complementary The project will incorporate the lessons learned from the Sustainable fisheries project regarding stakeholder engagements and participation Fishermen are part of the targeted groups Non-Duplication USAID Project focuses on fisheries management through policy and institutional strengthening, which the project does not focus on
Sustainable Fisheries Management project EU and FoN / Care Int.	Recently launched so no lessons learned	Complementary Fishermen are part of the targeted groups Non-Duplication Focuses on ensuring sustainability of marine fisheries resources, which UN-Habitat does not focus on.
MWH Ada coastal protection works 1st and 2nd phase[84] - Ghana government / Deme Concluded in 2015 US$ 183 m 15 Groynes over 14.7 km stretch	It is working at the beginning and the end of the stretch It is very expensive; thus, the UN-Habitat project should propose affordable interventions with results that come close	Complementary Lessons learned from these interventions should be integrated in the project approach Non-Duplication UN-Habitat could focus on livelihood enhancement /protection affords at the lagoon site

[83] https://www.adaptation-fund.org/wp-content/uploads/2015/09/RESUBMISSION_Ghana-AF_proposal_-29-January-2015.pdf
[84] https://www.deme-group.com/references/ada-coastal-protection-works
http://www.franki.co.za/ada-coastal-protection-works-phase-2/

MWH Keta coastal protection works Concluded 2002 / 2003 US$ 52 million 6 Groynes over 6,5 km stretch	It is working at the beginning and the end of the stretch It is very expensive; thus, the UN-Habitat project should propose affordable interventions with results that come close	Complementary Lessons learned from these interventions should be integrated in the project approach Non-Duplication UN-Habitat could focus on livelihood enhancement /protection affords at the lagoon site
Integrated climate risk management for adaptation to climate change 2015-2018 GIZ	Ensure vulnerable population groups, private businesses and governments against financial risks from extreme weather events.	Complementarity Both projects work on increasing resilience to climate change in Ghana. They complement each other by working on different sectors. Non-duplication The GIZ project works on risk management through insurance solution and other financial mechanisms,
Ghana Community Resilience Through Early Warning Systems 2013-2018 UNDP	Build capacities within the country to reduce disaster risk.	Complementarities Both projects work on building resilience in the country and the project can get input from their hazard mapping and vulnerability assessments Non-duplication The UNDP project focuses on providing resilience through early warning systems for natural disasters.
Adaptation of agro-ecosystems to climate change 2012-2017 GIZ	Define agricultural sector policy and national support measures for the adaptation of land use systems to climate change.	Complementarities Both projects work on ensuring food security under climate change in different areas of the country. Both projects work on capacity building to climate change adaptation. Non-duplication No geographical overlap. GIZ project works on savannah and transitional region. The GIZ project is focused on farming.

Relevant projects/programme, executing entity and budget	Lessons learned (relevant for proposed interventions)	Complimentary potential And non-duplication
Côte d'Ivoire		
Grand-Bassam opening of river mouth project – Côte d'Ivoire government and Morocco No funding yet	Not started yet but Deltares study is useful to understand dynamics	Complementary Sand could be used to create a sand motor Opportunities to integrate Deltares studies into the approach of the project Non-Duplication The project will not focus on Grand-Bassam river mouth
Climate finance readiness in Côte d'Ivoire Ministry of Environmental and Sustainable Development 2016 African climate Change Fund (ACCF)	Advanced climate finance readiness at national level.	Complementary Both project could collaborate on capacity building on climate change at national level Mobilization of resources to fight against climate change (objective of ACCF project) could support replicability of successful intervention of UN-Habitat project Non-Duplication ACCF project only focuses on climate finance
Emergency Infrastructure Renewal Project World Bank 2012-2020	The incorporation of local labour and women integration has proven to provide a positive social impact for people in the project area. The project aimed at supporting economic and social development of the municipality.	Complementary The project will incorporate and complement interventions from World Bank on basic infrastructure improvement: urban transport, water supply, sanitation and waste management. Non-Duplication No geographical overlap
Cocody Bay rehabilitation Marchica Med Company. 2014- ongoing	Ecological review of the lagoon Ébrié and the Bay of Cocody. Cocody Bay Master Plan	Complementary The project will integrate strategies and plans from the Cocody Bay master plan

		Non-Duplication The project doesn't target Cocody bay
Abidjan integrated sustainable urban planning and management[85] Ministry of Environment and Sustainable Development, Autonomous District of Abidjan. 2015 - ongoing	Recently started not lessons learnt reported yet.	Complementary Coordinate on working on establishing an urban observatory with an urban planning data base. Coordinate on working on a city-wide drainage and climate change adaptation strategy for the Greater Abidjan area Non-Duplication The project will focus on improving urban planning and management in other departments
Strengthened Environmental management System for Coastal Development to meet Rio Convention Objective Ministry of Environment MINESUDD. 2013 – ongoing GEF	Environmental Management Information System (EMIS) for decision making on coastal zone development. Piloting the use of improved environmental information systems for better decision making related to coastal zone management	Complementary The project will incorporate the GEF project lessons learned and database for the analysis and decision making on coastal resilience Non-Duplication The GEF project only focuses at policy and governance level
Protection of mangroves through the creation of firewood plantation[86] UNDP. 2008-2009	Deforestation linked to firewood supply for urban areas is becoming an increasingly significant problem in Côte d'Ivoire. Successful experience in creating a firewood park demonstrates that this model can be a solution for sustainable firewood management in urban areas, while also generating income for poverty alleviation. In coastal zones, these firewood parks can also contribute to preserve the mangrove ecosystem and increase the awareness of the communities involved.	Complementary The project will contribute to the protection and restoration of mangroves ecosystems. Gender mainstreaming as part of the GEF project will enhance effectiveness of gender inclusive activities as part of this project Non-Duplication In Anan village (Bingerville). No geographical overlap. To address environmental protection, this project will focus on spatial planning
Adaptating to climate change and increasing the resilience of the population in south-west Côte d'Ivoire 2012-2016 GIZ	Increase resilience to climate-related risks and stabilise livelihoods.	Complementarity The project also aims at protecting and adapting income sources. The project will learn from their practice especially on agriculture cultivation. Non-duplication No geographical overlap. GIZ projects works in the south-west of the country. The GIZ project focuses on food security and food supply. The GIZ project does not focus on coastal erosion impacts.
System da Alerte Precoce (SAP) Concentualisation stage	This project works at the national scale and is at the concept note stage. PNUD, SODEXAM, the government a Green Climate Fund are engaged.	Complementarity The Project will collect in meteorological information and share with the responsible sectors (energy, agriculture, health ministries). The SAP works at the strategic and coordination level. The (national scale) information from SAP can be combined with the information from the subproject of EWS to strengthen the resilience and generate knowledge.
Projet d'assainissement et Resilience Urbaine (PARU) de Abidjan, funded by the World Bank Conceptualisation stage	The project is at the concept note stage and focuses on the innondations in Abidjan.	Non-duplication The PARU project works only in Abidjan.

[85] https://www.thegef.org/project/cities-iap-abidjan-integrated-sustainable-urban-planning-and-management
[86] https://sgp.undp.org/index.php?option=com_docman&view=download&alias=47-mangrove-project&category_slug=fact-sheets&Itemid=257

PART II.H LEARNING AND KNOWLEDGE MANAGEMENT

The whole project is embedded with knowledge building and knowledge management aspect. To start with, all three component comprise capacity-building activities. Component 1 presents capacity building activities at regional and national level -in collaboration with the Abidjan Convention-, to mainstream general climate change adaptation concepts and strategies, boost the coordination of regional knowledge, and capitalize on best practices and lessons learned (cross-fertilization activities). Component 2 presents trainings and support to national ministries in terms of planning practices and existing tools. Component 3, together with the support to community plans and to the implementation of the subprojects, comprises one outcome fully dedicated to local-level trainings, to ensure the sustainability of the subprojects (their maintenance and management), as well as to diffuse cross-cutting knowledge related to solid waste management, soil management, etc.

On top of the outputs drafted with the clear intention of building and transferring knowledge, learning will occur throughout the process. Under component 1, for example, the activities to boost coordination, as well as the Regional Assessment, will create new material and knowledge through analysis and interactions between government stakeholders, the academia, national environmental experts and communities. In addition, the real implementation of both spatial development frameworks (component 2) and of the subprojects (component 3) will trigger a process of learning-by-doing, in collaboration with experts in the field, local governments and communities, supporting the learning and learning-by-doing processes.

In particular, at the community level, a participatory approach (involving communities and local authorities in planning and implementation activities) will lead to increased local knowledge on climate change adaptation, especially related to local coastal protection and income generating climate resilient activities. Project demonstration sites will contribute, from the start and in an on-going way, to sharing lessons and training. Community level trainings will be held on identified needs and to operate and maintain interventions. Another component of these trainings will be increasing knowledge on gender-responsive adaptation which will support women inclusion and integration as key actors in ensuring climate resilience. In order to achieve this, a women quota for participation will be applied for each training, at the same time outcomes from community consultations regarding women challenges, vulnerabilities and opportunities will be incorporated in the training agenda. It will be key to identify outputs and activities where women can have a leading role. The project will also use a participatory monitoring process, which will enable the beneficiary communities to work directly with the project's M & E and Public Information officer, to highlight issues in delivery and to strengthen adaptation benefits, including in replication and sustaining the project's gains.

Through existing platforms, including at the Abidjan Convention, it is expected that the project and its inputs to regional and national frameworks will be actively shared with other governments, as well as the lessons learnt. The online materials will be mainstreamed and collected also through the webpage under the Abidjan Convention website (output 1.1.1).

Table 16. Outputs, learning objectives and indicators and knowledge products

Expected concrete output/intervention	Learning objectives (lo) & indicators (i)	Knowledge products
1.1.1. Set up a work plan with the Abidjan Convention for the initiatives and events to mainstream (live and digitally) lessons learned and to boost capacity to adapt to climate change.	(lo) materials mainstreamed and shared about lessons learned, best practices, and climate change adaptation material focusing on Coastal West Africa (i) Number of materials uploaded and downloaded	One knowledge platform to share learning materials, lessons learned, best practices and design, operationalization, execution and evaluation of plans and projects
1.1.2. Round-tables for regional bodies and national governments (through the Abidjan Convention platform) to agree on spatial strategies for a coordinated implementation of climate change adaptation programs/projects (e.g. WACA)	(lo)coastal dynamics and impacts of interventions comprehensively by linking data sources, knowledge and capacities from experts, decision makers, companies and communities (i): number of knowledge products, plans and models developed to fill existing gaps and trainings conducted	Reports, plans and models developed to fill existing gaps and trainings modules developed and replication guidelines West Africa knowledge management and sharing mechanism at Abidjan Convention
1.1.3. Regional Assessment identifying key common challenges, climate-change hotspots and priority areas (including trans-boundary issues) and recommendations for climate change adaptation at different scales	(lo): Understand major drivers of climate change in costal west Africa, identify hotpots of risk (i)Number of GIS maps produced	One Regional Assessment with spatial planning focus and integrating spatial assessments developed by other funding sources and covering current gaps
1.2.1. Trainings for regional bodies and national governments (through the Abidjan Convention platform) for increasing capacity of the use of data and tools to foresee and manage climate change-related risks and impacts	(lo)coastal dynamics and impacts of interventions comprehensively by linking data sources, knowledge and capacities from experts, decision makers, companies and communities (i): number of knowledge products, plans and models developed to fill existing gaps and trainings conducted	Reports, plans and models developed to fill existing gaps and trainings modules developed and replication guidelines West Africa knowledge management and sharing mechanism at Abidjan Convention

1.3.1. Cross-fertilization events to mainstream at local level experiences from community plans and implementation of sub-projects all over the region	(lo) local strategies to cope with climate change and adapt at local level (i)Number of materials uploaded and downloaded, and number of live e-nets organized	Reports and experiences (events) shared and that put in contact communities facing similar challenges
2.1.1. Two Sub-national-level Spatial Development Framework/District level Spatial Development Frameworks: 1 targeting the Volta Delta coastal area (Ghana) and one targeting the Grand Ponts region (Côte d'Ivoire).	lo): strengthen capacity of district and national government staff to develop strategic management and spatial / land use planning instruments (i): number of government staff trained, number of trainings, initial, interim and final survey to government staff and involved stakeholders; and number of plans, disaggregated by gender and age	2 Spatial Development Frameworks with adapted SDF methodology to the West African (Ghanian and Ivorian context) and including collected data, matrix of functions and spatial framework
2.1.2 Local-level Spatial Development Frameworks (Local development plans): two in Ghana targeting Ada East and Anloga/ Keta districts, and one in Côte d'Ivoire targeting the department of Jacqueville, with climate change-related coastal risks identified and measures to increase coastal resilience proposed	lo): strengthen capacity of district and national government staff to develop strategic management and spatial / land use planning instruments (i): number of government staff trained trainings and number of plans disaggregated by gender and age	3 Spatial Development Frameworks at the local level, including evaluation, plan, operationalization and implementation phases, with collected data and risk maps and adapted Our City Plans methodology to the West African (Ghanian and Ivorian) context
2.1.1. On-the-job trainings and workshops to strengthen capacity of the Ministries of the Environment and Sustainable Development and of Planning and Development and municipalities (Ghana), and of of Land Use Spatial Planning Authority (LUSPA) and Municipal District Assemblies (MMDAs) (CdI) to develop, implement, and update spatial development frameworks, to develop, use and update spatial development frameworks	(lo) mainstreaming climate change adaptation strategies that can be addressed through planning, main frameworks and tools for integrating climate change adaptation into planning, and impacts of interventions comprehensively by linking data sources, knowledge and capacities from experts, decision makers, companies and communities (i) n of people trained disaggregated by gender and age	Training materials for spatial planning and the mainstreaming of climate change adaptation in territorial and urban planning
Output 3.1.1. Community-level plans (11 in Ghana and 10 Côte d'Ivoire) developed with the purpose to plan, operate, maintain, monitor and sustain/replicate concrete adaptation measures deriving from the subprojects.	(lo): increase awareness, ownership of proposed interventions and improve the capacity to operation and maintain these (i): number of community members trained (disaggregated by gender and age) and number of plans	21 community plans Documentation of action planning processes, training modules, prioritized interventions and sub-projects executed
Establishment of EWS	(lo): understand which interventions are most effective and low cost with replication and scale-up potential in other areas and countries (i): number of people trained on EWS, disaggregated by gender and age	1 Manual for the design and execution of EWS projects in the West African context
Integrated NBS for urban flood adaptation	(lo): understand which interventions are most effective and low cost with replication and scale-up potential in other areas and countries (i): number of interventions focused flood mitigation from heavy rains and poor drainage	1 Manual for the design and execution of NBS projects in the West African context
Mangrove restoration	(lo): understand which interventions are most effective and low cost with replication and scale-up potential in other areas and countries (i): number of interventions focused on mangrove restoration	1 Manual for the design and execution of mangrove restoration projects and adaptation finance in the West African context
Climate resilient agriculture	(lo): understand which interventions are most effective and low cost with replication and scale-up potential in other areas and countries (i): number of interventions focused on climate resilient agriculture	1 Manual for the design and execution of NBS projects in the West African context including guidelines for the establishment of training centres
3.3.1. Trainings for Municipal staff and communities targeting sub-projects implementation and/or maintenance	(lo) basic knowledge about planning, urban flood resilience facilities and strategies, climate resilient agriculture, sustainable water management, and soil (i) Numbers of people being trained disaggregated by gender and age	Training materials for municipal staff and communities in thematic areas of the sub-projects

PART II.I CONSULTATIVE PROCESS

For the project preparation, from 2016 to 2021 UN-Habitat has implemented several meetings and workshops in both countries to:

- Align with National and sub-national priorities (see prioritized targeted areas and activities in Annex 3: Subprojects).
- Avoid duplication with other projects from government, UN agencies, NGOs, etc. and use lessons learned (shoed in Part II.G Duplication with other Funding Sources).
- To comply with standards, rules and regimentations (showed in Part II. F Compliance with Relevant National Technical Standards).

- Identify specific needs and possible concerns of marginalised and vulnerable groups (see outcomes in Annex 4 Consultation and participants list, activities and further details in Consultation Details).
- Identify potential environmental and social risks and impacts (see alignment with national requirements for conducting EIA consultations in Annex 5 Gender Policy and Cross-Cutting Issues).

Table 17. List of stakeholders consulted. For more details, including outcomes, see Annex 4.

Stakeholder	Ghana	Cdl	Principle choice for consultation					Method
			To align with government priorities	To avoid duplication with other projects	To comply with standards, rules and regulations	To identify specific needs, possible concerns vulnerable groups	To identify potential environmental and social risks and impacts.	
Ministry of Environment, Science, Technology and Innovation (also on gender). Wildlife Division from the Forestry Commission indirectly involved in the project implementation	x		x	x	x			Private meetings + workshops
Environmental Protection Agency (EPA)	x				x		x	Private meetings + workshops
Ministry of Local Government and Rural Development.	x		x	x				Private meeting
Municipal District Assemblies in Tema, Ningo Prampram, Ada West, Ada East, and Anloga/ Keta	x		x	x		x		Private meetings + workshops
Land Use Spatial Planning Authority	x		x		x			Private meetings + workshops
Ministry of Food and Agriculture	x		x	x	x			Private meetings + workshops
SODEXAM		x		x			x	Private meeting
Fisheries Commission	x		x	x	x			Private meeting
Traditional councils	x	x				x	x	Private meetings + workshops
UNDP	x			x		x	x	Private meetings + workshops
UNCDF	x			x		x		Private meetings + workshops
UNICEF (gender)	x	x		x			x	Private meeting
UN Women (gender)	x	x		x			x	Private meeting
UNEP/Abidjan Convention		x		x		x		Private meeting
FAO		x		x				Private meeting
Development Institute/ Ghana Delta Alliance Wing	x			x		x		Private meetings + workshops
Hem Poano NGO	x			x		x		Private meeting
Mangrove Grower's Association	x					x	x	Workshops
Farmers Association	x					x	x	Workshops
USAID/ CRC/URI	x			x		x		Private meeting
PACT	x			x		x		Private meeting
Tetra Tech	x			x		x		Private meeting
Spatial Solutions	x			x		x		Private meeting
Dutch Embassy	x			x				Private meeting
University of Ghana	x				x			Private meeting
Targeted communities	x	x		x		x	x	Public meetings + workshops
Ministry of Environment and Sustainable Development (MINEDD) (also on gender)		x	x	x	x			Private meetings + workshops
Agence National de l'Environnement (ANDE)		x		x			x	Private meeting
Ministry of Interior (DGDDL)		x	x		x			Private workshops
Ministry of Construction, Housing and Urban Planning (MCLU)		x	x	x	x			Private meetings + workshops
Municipalities of Cocody, Jacqueville, Grand Bassam and Port Bouet (Technical services)		x	x	x		x		Private meetings + workshops
École d'architecture D'Abidjan		x			x			Private meetings + workshops
Université Felix Houphouet Boigny, Abidjan / CURAT (remote sensing and GIS)		x			x			Private meeting
African Development Bank (AfDB)		x		x		x		Private meeting
World Bank		x		x			x	Private meeting

The conceptualisation of this project builds on existing collaborations with the Government of Ghana as well as requests for support from both countries. **In 2016**, the first consultations with relevant stakeholders (Ministries, municipalities, international organisations, AF focal points, etc) were held to define the scope of the pre-concept note, ensuring alignment with national priorities (i.e. national strategies and plans).

For the concept note stage of this project, in **November and December 2017,** field consultations and private meetings took place both in Cote d' Ivoire and Ghana. Private meetings with representatives from ministries, district governments, NGO's, Universities, and other relevant stakeholders were conducted to identify main climate change challenges and needs; proposal priorities and target areas; and existing projects in target areas to avoid duplication. During the field consultations, a combination of structured questionnaires and

focus group discussions (with especial attention to women, youth and other vulnerable groups) were applied to further collect specific information such as:

- Target population, poverty rates, means of livelihoods, gender-disaggregation (women and youth), vulnerable groups (elderly and disabled) and their specific challenges and needs. Results are under Part III.C Measures for Environmental and Social Risk Management, as well as under the Feasibility sheets from the ESIA.
- Climate change related hazards, risks, impacts and vulnerabilities. Results are in Annex 2 Vulnerability Analysis.
- Barriers to adapt to the identified impacts.
- Community assets.

The field consultations took place in cooperation with the Development Institute/ Ghana Delta alliance Wing in Ghana, and with the École d'Architecture in Côte d'Ivoire.

For the proposal stage, **during 2018,** private meetings were held with leading ministries and districts in both countries to discuss the project approach as well as the implementation and coordination mechanisms. At community level, target group discussions were also held to agree on the list of priority interventions. Some of the proposed interventions were excluded due to cost inefficient (high costs), non-feasibility due to environmental risks (e.g. erosion generation in other areas) and non-preference of beneficiary groups. In some discussions, new interventions were suggested by the communities (e.g. mangrove restoration). During this effort special attention was put to ensure these activities will equally benefit and empower women and youth.

During 2019, to detail the interventions, their operability, management and sustainability, further private meetings and discussions were conducted with communities, ministries, other UN agencies and other stakeholders. In addition, to validate all project components for the proposal submission, workshops with all national, regional and local stakeholders were held for two days. These consultations included key community representatives: chiefs, women and youth organizations, elderly, fishermen, farmers etc.

In 2020, for the full proposal development phase, accredited consultants conducted the feasibility assessments, and environmental and social risks screening and impact assessment in both countries. These assessments followed national and AF requirements (e.g. consultations with all beneficiary groups to identify potential risks and impacts, including specific possible concerns of women and youth).

In December 2021, a new mission to Ghana and Côte d'Ivoire took place to validate the physical interventions and its location through filed visit to the 21 targeted communities. A new round of private meetings with relevant entities of the government (ministries, planning department, district assemblies, prefectures, municipalities, etc.) were also held to update on the project development, exchange on existing similar projects and gather.

For all the consultations with the communities, special attention was given to the inclusion of vulnerable groups to understand specific needs in the resilience building process, as part of the gender responsive strategy of the project. This was done through identified community-based representatives of women, elderly, youth and children and disabled. For example, in Ghana, there were participants from women and youth groups such as GAGGA Youth, DUNENYO and NUGORLI.

- Wokumagbe (Country: Ghana; District: Ada West)

Main challenges: Lack of sanitation and drainage system, sea level rise, heavy rainfall, change in the rainfall patterns, accumulation of sediments in the lagoon and limited sources of livelihood.
Community's adaptation suggestions: none.

- Akplabanya (Country: Ghana; District: Ada West)

Main challenges: Lack of sanitation and drainage system, polluted lagoon, accumulation of sediments in the lagoon, limited sources of livelihood and floods.
Community's adaptation suggestions: Dredging of lagoon, sandbags on the ocean line and drainage system.

- Goi (Country: Ghana; District: Ada West)

Main challenges: Lack of sanitation and drainage system, accumulation of sediments in the lagoon, floods, and drought.
Community's adaptation suggestions: dredging of lagoon, sandbags on the ocean line and drainage system.

- Kewunor-Azizanya (Country: Ghana; District: Ada East)

Main challenges: floods, accumulation of sediments in the lagoon, change of environmental characteristics with the new water points.
Community's adaptation suggestions: dredging of lagoon.

- Agorkedzi/Atiteti (Country: Ghana; District: Anloga-Keta)

Main challenges: Lack of sanitation and drainage system, polluted lagoon, accumulation of sediments in the lagoon, floods, heavy rainfall events, change in the rainfall patterns and sea level rise.
Community's adaptation suggestions: dredging of lagoon, sandbags on the ocean line, drainage system and mangrove.

- Agbledomi (Country: Ghana; District: Anloga-Keta)

Main challenges: Lack of drainage system, accumulation of sediments in the lagoon, drought, floods, change in the rainfall patterns, sea level rise and soil salinization.
Community's adaptation suggestions: sandbags on the ocean line and mangrove.

- Dzita (Country: Ghana; District: Anloga-Keta)

Main challenges: Lack of drainage system, accumulation of sediments in the lagoon, drought, salinity, floods, risen temperature, change in the rainfall patterns, sea/lagoon level rise and soil salinization.
Community's adaptation suggestions: drainage system.

- Whuti (Country: Ghana; District: Anloga-Keta)

Main challenges: Accumulation of sediments in the lagoon, drought, salinity, floods and risen temperature, change in the rainfall patterns, sea/lagoon level rise and soil salinization
Community's adaptation suggestions: drainage and sandbags.

- Lagbati/Lashibi (Country: Ghana; District: Anloga-Keta)

Main challenges: Accumulation of sediments in the lagoon, drought, soil salinity and compactness, floods of agriculture land, risen temperature, change in the rainfall patterns, sea/lagoon level rise and soil salinization.
Community's adaptation suggestions: dredging of the lagoon and mangrove reforestation.

- Woe (Country: Ghana; District: Anloga-Keta)

Main challenges: Accumulation of sediments in the lagoon, drought, soil salinity and compactness, floods of agriculture land, risen temperature, change in the rainfall patterns, sea/lagoon level rise and soil salinization.
Community's adaptation suggestions: dredging of the lagoon and elevated agriculture system and training.

- Tegbi (Country: Ghana; District: Anloga-Keta)

Main challenges: Accumulation of sediments in the lagoon, drought, soil salinity and compactness, floods of agriculture land and risen temperature.
Community's adaptation suggestions: move agriculture land and create irrigation system.

Cote D' Ivoire:

- Mondoukou (Country: Côte d'Ivoire; District: Grand-Bassam)

Main challenges: High waves intensity, flooding due to storms and sea/ lagoon level rise, warmer temperature, decrease of fish, clandestine fishing (inadequate quantities).
Community's adaptation suggestions: mangrove plantation, safe heaven construction and drainage system.

- Quartier France (Country: Côte d'Ivoire; District: Grand-Bassam)

Main challenges: Sea level rise, accumulation of sediments in the lagoon, soil saturation, agriculture in saturated soil and floods
Community's adaptation suggestions vegetation barrier in the lagoon








- Azuretti (Country: Côte d'Ivoire; District: Grand-Bassam)

Main challenges: flooding, coastal erosion, pollution, sedimentation of the lagoon, lack of employment and education facilities.
Community's adaptation suggestions: mangrove to regulate and reduce flooding, sandbags to block water, dragging, pen culture.

- Vitre 2 (Country: Côte d'Ivoire; District: Grand-Bassam)

Main challenges: Lack of drainage system, warmer temperature, decrease of fish, sediment accumulation and water level rise.
Community's adaptation suggestions: Mangrove plantation and pen culture.

- Grand-Jack (Country: Côte d'Ivoire; District: Jacqueville)

Main challenges: Lack of drainage system, accumulation of sediments in the sea, floods, change in the rainfall patterns, drought and sea level rise.
Community's adaptation suggestions: Drainage system

- Attoutou B (Country: Côte d'Ivoire; District: Jacqueville)

Main challenges: Accumulation of sediments in the lagoon, drought, floods affect agriculture, change in the rainfall patterns and lagoon level rise.
Community's adaptation suggestions: Mangrove restoration, dragging and pen culture.

- Koko (Country: Côte d'Ivoire; District: Jacqueville)

Main challenges: Flooding, sediment accumulation and water level rise.
Community's adaptation suggestions: EWS to guide agriculture, safe haven construction, community centre.

- Tiemen (Country: Côte d'Ivoire; District: Jacqueville)

Main challenges: Resettlement/ land speculation, decrease of fishing, polluted lagoon, accumulation of sediments in the lagoon, risen temperature, change in the rainfall patterns, drought.
Community's adaptation suggestions: Pen culture, mangrove restoration.

- Tefredji (Country: Côte d'Ivoire; District: Jacqueville)

Main challenges: Flooding, lack of sanitation, lack of drainage system, coastal erosion, lagoon level rise, sediment accumulation
Community's adaptation suggestions: Mangrove and drainage channels.

- Taboth (Country: Côte d'Ivoire; District: Jacqueville)

Main challenges: flood, erosion, sediment accumulation, soil saturation and salinization, lagoon level rise, lack of fishes.
Community's adaptation suggestions: mangrove plantation.

The Complete national feasibility assessment, ESIA-ESMP and consultation reports are available on request

PART II.J JUSTIFICATION OF FUNDING REQUEST

The proposed project components, outcomes and outputs fully align with national and local government priorities and gaps identified, with identified community and vulnerable groups needs and with the Adaptation Fund outcomes as stated in the Adaptation Fund results framework. This alignment has resulted in the design of a comprehensive approach in which the different components strengthen each other and in which outputs and activities are expected to fill identified gaps of Côte d'Ivoire's, Ghana's and West Africa's current climate change response. The project aims at maximizing the funding amount for the concrete adaptation output (all under outcome 3.2, under component 3) directly benefitting local communities and the two countries. Funding allocation to the other (softer) components is required to support the effective execution and sustainability of outcome 3.2 and to share knowledge and lessons learned. The table below provides a justification for funding requested, focusing on the full cost of adaptation reasoning, by showing the impact of AF funding compared to no funding (baseline) related to expected project outcomes.

Table 18. Overview of impact of AF funding compared to no funding (baseline) related to expected project outcomes

Outcomes	Baseline (without AF)	Additional (with AF)	Comment and alternative adaptation scenario's

1.1. Improved coordination among governments to adapt to climate change and to implement effective coherent measures for climate change adaptation at regional level	Governments in the region do not present aligned climate change priorities and strategies. Vertical coordination between regional institutions and national governments needs to be improved	The expected outcome of the project activities under outputs 1.1, 1.2 and 1.3 can bring relevant regional and national stakeholders at the same table and put basis for discussion, common strategies, common understanding, and common knowledge	Without coordination raising activities, regional investments and strategies with the potential to adapt climate change, may not be fully integrated in national policies and (spatial plans) and the potential may be lost. Or, even worse, such strategies and plans may conflict with national level ones.
1.2. Capacity-building events and knowledge sharing trans-boundary activities among the participating countries are discussed and prepared though the Abidjan Convention for: i)sharing among the different countries experience-based adaptation mechanisms for replication; ii) training of national governments; iii) participation to global events; iv) support national governments in including coordinated regional level adaptation measures	Regional institutions, and national governments in the region (as well as the private sector and other relevant stakeholders) have limited knowledge of drivers of climate change and potential adaptation strategies. Knowledge and data exist, but are fragmented. As well as tools exist, but there is poor capacity to chose the proper ones and use them in the climate change adaptation arena.	The expected outcome of the proposed project activities under outputs 1.2.1. is that target institutional / organizational capacity and tools to identify and manage coastal climate change-related risks / impacts in the Region, and Ghana and Côte d'Ivoire (and West Africa). Knowledge on innovative adaptation practices in West Africa will be strengthened.	Without activities related to this outcome, there is a risk that interventions and planning practices under component 2 will not be replicated and sustained in Ghana and CdI and in West Africa Alternatively, knowledge will not be shared between countries which will limit the potential for replication of good practices
1.3. Cross-fertilization activities for mainstreaming les-sons learned and best practices captured though the implementation of community plans and sub-projects are mainstreamed among local communities in partnership with the Abidjan Convention as regional knowledge management platform	Good practices exist in the region, however there is lack of mechanisms to transfer local-designed solutions and to capitalize success of local experiences.	The activities related to this outcome will allow communities, district/departments, and national governments to transfer best practices in similar contexts, and to capitalize on their experience.	Without activities related to this outcome, there is a risk that subprojects will not be replicated by communities and that local context will keep importing solutions from other contexts, that do not fit their needs as much as locally designed solution may do.
2.1. Sub-national and district/department level spatial development framework	Present plans at sub-national and district/department level do not include climate-change related aspects and do not support adaptation	The expected outcome of the proposed project activities is that government institutions will be able to understand and identify climate change risks and impacts in coastal areas and manage development taking these risks and impacts in consideration, e.g. by avoiding development in high risks areas and in that way avoiding costs of damages and destruction.	Without relevant climate change risks and impacts information on coastal areas integrated into plans, no strategic decisions about the future of target areas can be made. Alternatively, the government continues planning development without understanding / consideration of climate change risks and impacts with the risk that development will take place in risk areas.
2.2. National and sub-national officers trained in urban climate adaptation techniques, monitoring approaches, and climate-change-related policy development	Detailed / specific climate change threat and hazard risk and impact information / evidence is not available (and integrated in strategic coastal management and spatial / land use plans for the coastal areas in Côte d'Ivoire and Ghana. At the same time, technical staff is not trained to use existing tools to integrated climate change into the planning practice.	Thanks to the on-the-job trainings, technical staff will be fully aware of the processes going on under outcome 2.1., empowerment and sustainability of the outputs will be ensured. On top of this, after the project, the freshly trained technical staff will be able to transfer the new climate-change related knowledge to other pr	Without relevant climate change risks and impacts knowledge by the technical staff, no strategic decisions about the future of target areas can be made. Alternatively, the government continues planning development without understanding / consideration of climate change risks and impacts with the risk that development will take place in risk areas.

3.1. Community level plans developed in Ghana and Côte d'Ivoire with the purpose to plan, operate, maintain, monitor and sustain/replicate concrete adaptation measures	Communities are not aware of climate change risks and response options and they don't have the ownership over the processes to develop, operate and maintain (thus plan) possible interventions.	The expected outcome of the proposed project activities under these outputs is that community awareness and capacities to adapt to climate-related coastal hazard and threats will be strengthened through community planning The activities related to this outcome will allow communities to develop, operate and maintain (thus plan) the proposed interventions under outcome 3.2.	The district government and communities lack the capacity to organize communities and plan effectively for adaptation / resilience. Alternatively, only top-down planning approach could be used but this would not build community awareness and capacities and would risk implementing non-appropriate interventions
3.2. Climate change adaptation subprojects are fully developed with communities and municipalities, including detailed engineering studies, and implemented in the target cities mainly through community involvement as labour-intensive manpower	There is little district – national - international cooperation (and financing) to increase coastal resilience through concrete interventions. Some larger interventions have focused on hard infrastructure that is very costly and, in some cases, had negative impacts in other areas. There is also limited government attentions on specific community-level needs in the target areas and the communities have limited knowledge and capacity to respond to climate change in a concrete way	The expected outcome of the proposed project activities under outputs is that the target coastal areas will be more resilient to recurrent climate change hazards EWS, integrated NBS for urban flood adaptation, and mangrove restoration will support reducing negative impacts of coastal sea level rise and storms on the coast, serving as a protection buffer to communities and assets while also supporting sustainable livelihood options. Climate resilient agriculture will support communities to diversify and strengthen livelihoods Building up on traditional livelihoods and communities' skills, the proposed project activities will support sustainable livelihoods that will be resilient to climate change impacts and in that way make communities more resilient, also through improved income options	Alternative adaptation scenarios are resettlement, construction of large, more expensive physical infrastructure and community-level interventions. These community interventions will fit into the wider systems planned under this outcome. Large scale interventions have the risk of not being community driven and appropriate, which would lead to adaptation benefits for fewer people with the same project cost and a greater chance of negative social and environmental impacts.
3.3. Municipal staff and community members mobilised, trained and equipped for ensuring the sustainable management and/or maintenance of the implemented priority sub-projects	Communities are not aware of climate change risks and response options and they don't have the ownership over the processes to develop, operate and maintain (thus plan) possible interventions.	Technical staff and representatives from the communities will be trained on key concepts to implement the subprojects, manage them, and in general to adapt to climate change at local level	Without the training, the subproject would not be sustainable, and they would be abandoned as soon as the project is finalized.

PART II.K SUSTAINABILITY

The sustainability of the projects is essential to guarantee long-term impacts and benefits in the region, even after the conclusion of all foreseen activities. For this purpose, this project will focus on ensuring cross-sectorial and multi-level institutional engagement, strengthening communities' capacities and ownership throughout the different stages of the project and further the projects´ time frame. Sustainability will also focus on facilitating the maintenance and independence of economic opportunities and financial mechanisms, strengthening technical expertise and ensuring overall ecological balance in the environmental systems.

Sustainability by component

Component 1. Improved coordination of local and national governments in the region to cope with climate change, to integrate major infrastructural projects in their spatial strategies, and to learn from each other in order to face common transboundary cc-related hazards.

The Abidjan Convention platform has a strategic role for ensuring that regional activities forming outcome 1.1 follow a sustainable path. In general, the coordination activities, the roundtables, and the cross-fertilization activities (outcome 1.1., 1.2., 1.3) require a follow-up strategy during the final stage of the activities and if possible, the establishment of milestones to achieve in the upcoming years. For these purposes, focal points responsible of coordinating national efforts and the secretariat members will be essential to give continuity to the expected outputs.

Besides this, the Abidjan convention platform will ensure that regional assessments (output 1.1.3) provide sufficient information for further climate change adaptation projects. In a regional scope, to strengthen the continuity of the project, the Abidjan convention has adopted protocols related to sustainable mangrove management (Calabar protocol) and coastal management (Pointe Nore Protocol) that define goals which support institutionally and legally the activities that are planned in the current project.

Component 1 will provide data and institutional capacity strengthening for replicability within the country and the region. Software and guidelines used during trainings for regional bodies and national governments (1.2.1) will be available after the project ends. Capacities among local communities to monitor project activities will be strengthened during the cross-fertilization activities for mainstreaming lessons learned (1.3.1).

Component 2. Strengthened role of national adaptation plans in the spatial planning practice at national and sub-national level and improved capacity of governments in adapting to cc.

Capacities of national and sub-national governments (district level governments) to use specific planning methods emphasizing monitoring methodologies will be strengthened under output 2.1.1. As part of the agreements with the Abidjan Convention, guidelines used during the trainings for monitor project activities will also be available after the project ends. Strengthened knowledge and capacities (2.1.1), as well as personnel and data will remain within LUSPA, which will facilitate the replication of the planning process for any other regional plan.

LUSPA in Ghana and MMDAs in Cote de Ivoire will lead the development of the local-level and sub-national spatial development frameworks (2.1.1 and 2.1.2) and will apply a planning process methodology with the support of UN-Habitat aimed at increasing the availability of data, improve the understanding on stakeholder engagement, minimum requirements, and approval processes. The lessons learnt will be made available and shared with LUSPA and MMDAs to ensure that future plans have a clearer methodology, process and are more cost-efficient to elaborate and update.

The timeline for the development of the frameworks is 2030, which means that a review / update would be required towards 2030. The project will aim at strengthening the capacity and funding allocation from the Government of Ghana and Cote de Ivoire to ensure that technical capacity, human and financial resources are available for the review. In addition, LUSPAs leadership ensures this is a government led output whose sustainability is linked to the long-term engagement of the institution (with allocated staff and equipment). It is a technical team and therefore, sustainability risks from transition to other political scenarios is minimized.

The Government request for UN-Habitat's support brings an extra layer of sustainability to the plan since additional technical expertise and the experience of UN-Habitat in the development of territorial plans will be utilized to mobilize stakeholders and additional resources for project implementation, with UN-Habitat as a long-term partner of the Government. This applies for all plans to be developed in both countries.

After the first operational budget cycle, and because of the participatory process and capacity development included in the project, the local government will have gained additional technical and community engagement skills to support the communities in the update of the plans. The community plans represent an extra-layer of sustainability arrangements for the projects in component 3. Even though the subprojects will put in place the institutional, social, financial, and environmental processes to ensure their individual sustainability, the plan will act as an integrative process to bring on board additional stakeholders, donors, and investors, to enable replication and upscaling mechanisms. This output will deliver the implementation, maintenance, and sustainability plan for outputs under component 3.

Component 3. Municipal staff, communities and local stakeholders have successfully planned and implemented priority sub-projects to cope with climate-change related issues, such as sea level rise and floods, and access to climate-resilient livelihoods*
*Under this component, outcome 3.2. is presented in detail as it comprises the core outputs of the project: the subprojects, which as physical interventions call for a more detailed sustainability screening.

Output 3.1.1. (under outcome 3.1.) and output 3.3.1. (under outcome 3.3.), the Community plans and the trainings, respectively, ensure the overall sustainability of the subprojects implementation, as they prepare the ground for the subprojects to be implemented (from a spatial framework point of view), and they ensure the self-management of the practices, thanks to the capacity building being enhanced in the communities. Such activities will also boost empowerment of the project, and economic sustainability of the interventions will also be addressed by the trainings.

Outputs under outcome 3.2. (Subprojects):

- **3.2.1 Early Warning Systems**

Social: Participatory mapping and identification of evacuation centre and routes through participatory mechanisms will train and sensitize communities, keeping the project achievements durable. Awareness raising campaign and regular drills and trainings involving youth will ensure enhanced resident capacity to process and disseminate early warning and drought-related information to key stakeholders as well as the technical capacity to undertake concrete adaptation actions even long after the project has

ended. On the other hand, the evacuation plans contribute to improving the conditions and infrastructure of the beneficiary communities in the most vulnerable sites, thus permitting an effective response to drought and greater resilience to climatic variations and changes. A communication strategy, awareness raising, and regular drills are also a crucial component to the sustainability of the mechanism; in particular, the automated watershed gauging station and sirens need to be maintained through the deployment of adequate technical expertise and protected from eventual acts of vandalism; that is why it is crucial to involve surrounding communities in the process, so that everybody understands the need for these stations/sirens.

Financial: The project will inform in advance the communities of a drought-related crisis and reduce loss and damage of natural hazards. Also, new job opportunities will be generated on the EWS operations. Volunteer participation from community members to learn and engage will reduce the costs of the implementation ensuring financial sustainability for low-cost maintenance.

Environmental: The project will ensure environmental sustainability through strengthening the resilience of communities through the EWS and the evacuation centre and routes will inform people risk areas and flooding zones, allowing the community to cope with drought-related crisis situations and on the other hand to avoid overexploitation of natural resources to compensate losses due to drought impacts

Technical: The system will be adapted to the local context and complemented with traditional knowledge. The evacuation centre and routes will be defined based on the exist mechanism and informal system already in place. The subproject does not require complex technical engineering knowledge and with the training and capacity building this additional information will be transfer to local community. The automated watershed gauging station and sirens need to be maintained through the deployment of adequate technical expertise and protected from eventual acts of vandalism; that is why it is crucial to involve surrounding communities in the process, so that everybody understands the need for these stations/sirens.

Institutional linkages for sharing early warning information will also be supported and the targeted beneficiaries' capacities reinforced to access EW information. The project will strengthen institutional linkages and EW information for where they exist and establish new ones where they don't exist and strengthen municipal staff capacities for effectively managed EWS for floods. For a sustainable use and functioning mechanism of the EWS, overall responsibility for the EWS and related equipment will be given to the local authorities. Municipal technicians and all stakeholders, including police, military, civil authorities, health and geophysical agencies, telecommunication organization (satellites and mobile-cellular network operators), media (television, FM radio stations and community radios), schools and education facilities within target areas, will be trained on the use of the EWS related equipment. In Ghana, the institutions to be engage in the process are the Hydrological Services Department (HSD), Ghana Meteorological Agency (GMet), Water Resources Commission (WRC) and National Disaster Management Organisation (NADMO), specifically the emergency Operations Centre (EOC).

- **3.2.2 Integrated NBS for urban flood adaptation**

Social: The use of local and simple materials enables the community to maintain the facilities.

Trainings will build capacity for community to monitor, maintain but also assess and identify areas that could receive new facilities if environment changes.

Facilities will be part of the landscape and part of their livelihoods, and maintenance easily linked to the daily routine (gardening, cleaning the external areas, etc.).

Financial: The reduced cost of materials makes simpler to replace any structure/material whenever needed (e.g. after an extreme events). Volunteer participation from community members to learn and engage will reduce the costs of the implementation.

Environmental: Nature-based solutions, the project will be adapted to the change, making possible to work with the environment than against it, while still protect valuable land. Using local resources, will reduce the need of transportation of materials.

Technical: The strategies will be adapted to le local context and complemented/strengthen with traditional knowledge. Does not required hard engineering and knowledge can be transferred within the community. Technical sustainability will also be achieved by planting local species appropriate to the climate and designing the facilities according to the soil characteristics.

Institutional The improved regional coordination among the governments to promote climate resilience (Component 1) will support the long-term monitoring and expansion of measures of the urban flood resilience project.

- **3.2.3 Mangrove Restoration**

Social: This intervention's sustainability relies on the developed community ownership. The community will implement the intervention and receive capacity building activities for this purpose. Additionally, the project includes continued awareness creation to develop a self-drive and a high sense of responsibility to promote continuous replanting. It is also based on the resource and livelihood management plan, which should be long-term and be reviewed every two years, initially with the NGO experts and progressively transferring the capacity and know-how to the community group.

Financial: Economic/financial sustainability will be achieved by the ecosystem provision services that mangroves offer, e.g. mollusc selling activities and carbon offsets revenues, therefore improving the local markets in the region and its sustainability for the future. Restoration of the mangrove is a cost-efficient building with nature solution that mainly focuses on an initial investment that will be maintained by the CREMA in Ghana and the local Communities committees in Cote d´Ivore. These institutions will be responsible, along with the Municipal Assemblies of replication and upscaling, meaning that gained knowledge can be used elsewhere. This could be done through community capacity building and based on the lessons learnt from the final intervention report. There is a great opportunity for replication since the mangrove ecosystems are vast in this coastal area.

Environmental: Improving the mangroves by restoration will protect the coastal environment and habitats from degradation for future climate change. The capabilities of mangroves to adapt against stressors, such as sea level rise and weather conditions, makes them a sustainable solution regarding environmental sustainability.

Technical: Technical sustainability of mangrove restoration depends on two main factors. (1) Appropriate species and (2) site selection, done through the engineering study and design in the preparation activity. Technical studies required for active restoration include assessment of percentage of salinity, percentage of nutrients, granulometry, organic carbon and sedimentology studies. Additional technical sustainability will be provided through complementary measures such as:

Establishing buffer zones between coastal habitats and adjacent development.

Identifying and protecting areas where coastal habitats can retreat with sea level rise.

Fencing along the intertidal zone to prevent livestock access.

Results and experience from previous years will be used as a yardstick for sustaining the intervention. The project includes long-term monitoring of mangrove reforestation activities by the local government and specialized agencies conversant with the project to ensure a successful implementation. Insights on the capabilities of different mangrove types to adapt to climate change will guide future sustainable interventions of mangrove restoration.

Institutional: In Ghana, the CREMA (Community Resource Management Areas) will be applied. The community will manage the mangrove areas with equal participation and access. Target beneficiaries will have access to the lagoons with the pre-condition to sustain it within a changing climate framework, as per a signed performance-based agreement. The CREMA will be the responsible entity for sustaining this project over time, including mangrove monitoring activities for guaranteeing the sustainability of the BCP. This will be achieved by bringing some of the economic benefits of the intervention back to the CREMA. In Côte d'Ivoire, community committees will have to be set in order to guarantee communities 'participation and accountability during the active and passive restorations operations and monitoring.

- **3.2.4 Climate resilient agriculture**

Social: Training in the agricultural sector improve social ability to cope with climate hazards. Water, soil and land management can improve social sustainability and strengthen the role of women in agriculture practices.

Financial: The CREMA will be the responsible entity for sustaining this project over time. This will be achieved by bringing some of the economic benefits of the intervention back to the CREMA. Economic sustainability is expected to be obtained from crop production. The CREMA will also be responsible, along with the Municipal Assemblies, for replication and upscaling. This could be done through capacity building in the communities and based on the lessons learnt from the final intervention report. There is a great opportunity for replication since there are large agricultural areas with the same problem. In order to assure economic sustainability of the project, the socio-economic analysis will provide information regarding the market potential of salt resilient crops, considering the adaptation of new crops in the agricultural value chain.

Environmental: Climate change impacts reduce water availability and increase saltwater intrusion in coastal areas, threatening agricultural dependence on the environment. An opportunity offers the adaptation to climate change through climate-smart agriculture, agroecology, and crop-based management.

Technical: Crop cultivation strategies will include what will be the best option for soil irrigation according to the biophysical characteristics of the intervened area, the strategy will also include assistance during the crop season and demo trials at the training centre. The project's resources will identify and verify the feasibility of recent advancements in salt-resilient crops such as oil seeds, legumes, cereals, medicinal, lignocellulose, and fruit crops. It is also based on the resource and livelihood management plan, which should be long-term and be reviewed every two years. Results and experience from previous years will be used as yardstick for sustaining the intervention. Hydrogeological studies must include an assessment for recharging aquifers water demand, water consumption demand, availability of superficial water, and selecting the correct water infiltration system such as dry wells or injections wells

Institutional From the institutional and social perspective, the sustainability of this intervention relies on the built ownership by the communities through being implementors and capacity-building activities (component 2).

PART II.L ENVIRONMENTAL AND SOCIAL IMPACTS AND RISKS

The proposed project fully aligns with the Adaptation Fund's Environmental and Social Policy (ESP) and its 15 principles. To align with these policies and related guidelines, this section provides a brief summary of the risks assessment outcomes, which are shown in detail in Annex 6 (ESP). The environmental and social risk screening, assessment and ESMP are presented in Annex 6 at two levels. The first level is general, analysing all three components of the project. In general, proposed coordination activities, spatial and land use planning, community planning, trainings and workshops and knowledge management activities under Components 1, 2 and 3 have been categorized as low risk. Steps will be taken to ensure that no environmental or social impacts can occur. The second level zooms into the activities belonging to outcome 3.2 under component 3 (subproject) because it needs a technical and detailed view and presents related risks and mitigation measures.

The project fully complies with all applicable national laws and regulations (see Part II, Section F), focuses on marginalised and vulnerable groups, positively discriminates in favour of women, incurs no infringement on human rights and health, plans no resettlement whatsoever, and does not affect indigenous peoples (none present). With regards to the subproject implementation, activities have been designed to minimise potential risks by selecting numerous, small scale and very localised interventions, proposed and managed by the communities themselves (where possible) who have a stake in avoiding environmental and social impacts. This means that the potential for direct impacts is small and localised. In addition, the whole process has been carried out through continuative consultation, to ensure that all voices in the communities are heard and to keep double-checking the consistency of experts' opinion and local communities' opinion. There can be few indirect impacts, and that transboundary impacts are highly unlikely. Given this, cumulative impacts are also unlikely.

Outlined below is a summary of the findings of the preliminary screening process to identify and evaluate potential environmental and social impacts and risks of proposed interventions and based on that, of the entire project. The 15 safeguard areas outlined in the Adaptation Fund's ESP have been considered during the screening. With this information, the entire project has been categorized. As shown in Part II.I and Annex 4, consultations have been conducted to identify potential environmental and social risks and impacts and to identify specific groups needs and possible concerns. A draft gender baseline, containing disaggregated data and approach, containing specific approaches for women and youth, has been developed – see Annex 5.

Activities under Outcome 3.2. of Components 3 (subprojects) are 'concrete' interventions, and as such, some interventions have the potential, without an environmental and social safeguarding system, including mitigation measures and management arrangements, to create negative environmental and social impacts. As such, some interventions under this outcome fit into the medium (B) risk category. Annex 6 provides an overview of risks screening and impact assessment outcomes conducted in both Ghana and Côte d'Ivoire. In both countries, risks screening sheets have been completed for each proposed project activity. Besides that, accredited consultants prepared country specific ESIA-ESMPs and consultations reports in compliance with the AF ESP and GP and national requirements for conducting ESIAs. The outcomes have been consolidated in the proposal. Please find weblinks to the full country-specific reports: *Ghana ESIA-ESMP report* and *Côte d'Ivoire ESIA ESMP report.*

Because of the nature of the activities under outcome 3.2 of component 3, **the entire project is regarded as a medium risk (Category B) project**. Therefore, ESMPs have been developed, including risks / impacts mitigation measures for any risk identified. The country specific ESMPs can be found in the country reports and a summary/overall ESMP in Annex 5. Because of the risk management measures in place, no further assessments are required as per below table.

The project has been designed to generate positive economic, social, and environmental impacts, using inputs from especially women and marginalized and vulnerable groups in target communities and by incorporating best practices from other projects. The adaptation measures proposed have been selected together by the communities and local authorities, making sure they are culturally appropriate and local.

Below table is in alignment with table 1 in Annex 6. Initial risks were identified and for those, impacts assessed, and mitigation measures proposed. Therefore, no further assessment is required for compliance, only risk management of the initially identified risks.

Table 19. Risk Screening Results against all Adaptation Fund ES Principles

Checklist of environmental and social principles	No further assessment required for compliance	Further risk management required for compliance
Compliance with the Law	x	
Access and Equity		x
Marginalized and Vulnerable Groups		x
Human Rights	x	
Gender Equity and Women's Empowerment		x
Core Labour Rights		x
Indigenous Peoples	x	
Involuntary Resettlement	x	
Protection of Natural Habitats		x
Conservation of Biological Diversity		x
Climate Change		x
Pollution Prevention and Resource Efficiency		x
Public Health	x	
Physical and Cultural Heritage	x	
Lands and Soil Conservation	x	

As it was described previously in Part II, Section C, the project has many benefits both social and environmental and meets the national standards as it was mentioned in Section F above. Different stages of the risk screening and the ESMP itself were presented for public disclosure and results are available online for public consultation. A public grievance mechanism has been put in place for the entire duration of the project.

PART III: IMPEMENTATION ARRANGEMENTS

PART III.A ARRANGEMENTS FOR PROJECT MANAGEMENT

The following arrangements for project management (oversight, coordination and execution) have been agreed upon with AF DAs, the project steering committees and Execution Partners in Ghana and Côte d'Ivoire. The organigram in Figure 16 shows how the project will be supervised, coordinated and executed at the regional, national and local level. As UN-Habitat is the Multilateral Implementing Entity (MIE) of the project, UN-Habitat will be responsible for the overall implementation of the project, including contracting of execution partners and coordination with stakeholders that have a 'stake' or say in the project, mostly through the Project Steering Committees.

Figure 16: Management arrangements organigram

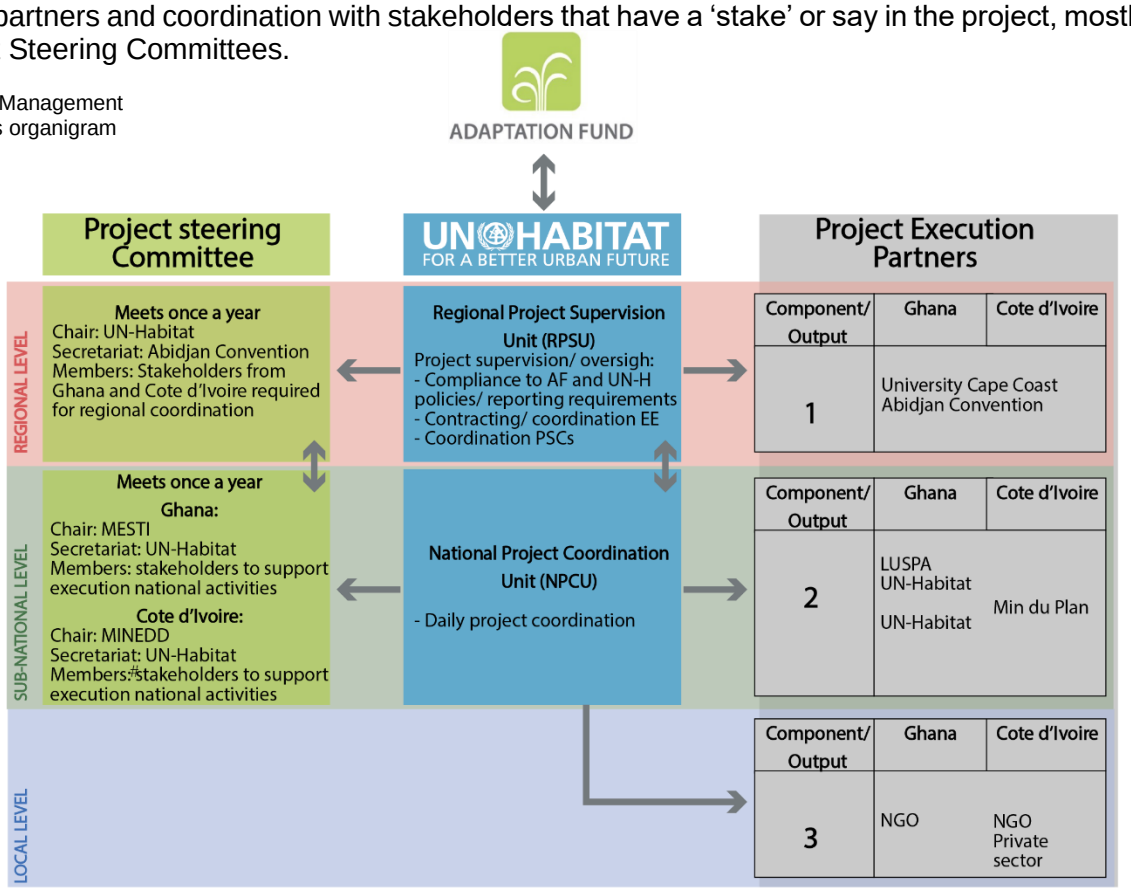


Table 20. Key project organigram stakeholders and roles and responsibilities

Stakeholder	Role and responsibility
UN-Habitat	Project oversight / supervision and coordination Compliance with AF and UN-H policies and reporting / M&E requirements, incl. safeguarding system Contracting and coordination execution partners Coordination of project as Chair of Regional Project Steering Committee and Secretariat of National Project Steering Comm. to execute components/ activities
Project Steering Committees	Providing political and technical inputs to ensure smooth implementation of the project from start to completion, including providing advice on how to deliver project outputs and the achievement of project outcomes in a timely matter in line with national and sub-national strategies and technical standards: Required coordination with relevant ministries and authorities Approve annual work plans and review key project periodical reports; Review any deviations and consider amendments to work plans and contractual arrangements.
National Project Coordination Unit in Ghana and Côte d'Ivoire	Responsible for the overall management, facilitation and daily implementation of activities in accordance with UN-Habitat procedures and those contained in the approved project document.
Project Execution Entities	Execute specific project components / activities under the direct supervision of the Regional Project Supervision Unit (RPSU) and the National Project Coordination Unit in Ghana and Côte d'Ivoire

Regional level: at the regional level, project implementation will be managed by the **Regional Project Supervision Unit (RPSU)**. This 'Unit', established by UN-Habitat in consultation with Project Steering Committees and formed by: (1) Regional Project Coordinator / Safeguarding System AF compliance specialist, M&E Communication and Gender specialist, will be responsible for project supervision / oversight, including coordination with and between **National Project Coordination Units (NPCUs)**, the **Regional-level Project Steering Committee** (**PSC**) and the **Project Execution Entities** (**PEE**). The Regional Project Supervision Unit will be responsible for ensuring project compliance with the AF and UN-H policies and reporting requirements, for contracting the Project Executing Entities, it will chair the Regional-level Project Steering Committee and act as the Secretariat of the National Project Steering Committee. This Regional-level Project Steering Committee will be responsible for 'providing the political and technical direction to the 'whole' project from start to completion and for ensuring that the regional component (i.e. component 1) of the project is realized and aligned to governmental agendas.

National level: at the national level, project implementation will be supported through **National Project Coordination Units** (**NPCUs)**. These 'Units' will be responsible for daily project coordination in Ghana and Côte d'Ivoire, including coordination on execution of the project activities with the Project Execution Entities. The National Project Coordination Units will be formed by: (1) Project Coordinator / Technical Project Staff / Administrative and Financial Assistant.

The 'Units' will also be a member of the **National-level Project Steering Committees (PSCs)** in Ghana and Côte d'Ivoire. These National-level Project Steering Committees will be responsible for providing political and technical direction to the country specific project activities from start to completion, and alignment with government agendas.

During the consultations, workshops and co-development of the project document in Ghana and Côte d'Ivoire, the formation of a **Project Technical Committee (PTC)** was also requested at the national level in Côte d'Ivoire. Members were identified and listed in the table below. The function of the PTC is to provide technical guidance and ensure alignment of the project with a broader number of technical stakeholders including government and sectorial institutions.

Local level: at the local level, project implementation will be supported through the **National Project Coordination Units** (**NPCUs).** The **National-level Project Steering Committees (PSCs)** will also have (government) representatives from the sub-national level, including from the target municipalities.

Table 21. Stakeholders in the project steering committees

Project Steering Committee (PSC)			
Stakeholders	Regional	National	
		Ghana	Côte d'Ivoire
UN-Habitat	Chair	Member	Member
Abidjan Convention	Co-chair	Member	Member
University of Cape Coast	Member	Member	
Ghana MESTI (EPA, LUSPA, AF Focal point)	Member	Chair	
Ghana NDPC	Member	Co-chair	
Ghana MLGRD (RCC)	Member	Member	
Ghana MLGRD (target MMDAs)		Member	
Ghana MWS (WRC)		Member	
Ghana MWH (HDS)		Member	
Ghana MSDI (CDA)		Member	
Ghana MLNR (FC)		Member	
Ghana MOFAD (IFMD)		Member	
District of Ada East		Member	
District of Ada West		Member	
District of Anloga[87]		Member	
Côte d'Ivoire MINEDD	Member		Chair
Côte d'Ivoire MI (Cabinet)	Member		Co-Chair
Côte d'Ivoire *MPD (Cabinet)*	Member		Member
Côte d'Ivoire Ministère de la ville (Cabinet)			Member
Côte d'Ivoire MCLU (Cabinet)			Member
Côte d'Ivoire MNADER (Cabinet)			Member
Côte d'Ivoire MTL (Cabinet)			Member
Côte d'Ivoire MEF			Member
Côte d'Ivoire MMG			Member
Côte d'Ivoire Ministère des Ressources Animales et Halieutiques (Cabinet)			Member
Côte d'Ivoire Secteur Privé (CGECI)			Member
Côte d'Ivoire ONG (REFACC, SOS FORET, PAGE VERTE)			Attendee
Total	**9**	**15**	**14**

[87] In 2019, the western part of the Keta District was split off to create **Anloga District**; thus the remaining part has been retained as Keta Municipal District.

Table 22. Stakeholders in the project technical committee

Project Technical Committee (PTC)			
Stakeholders	Regional	National	
		Ghana	Côte d'Ivoire
Côte d'Ivoire ANGIL/PNGEC/WACA (01)		n.a.	Chair
Côte d'Ivoire MINEDD/DLCC-PNCC (01)		n.a.	Member
Côte d'Ivoire Point Focal FA (01)		n.a.	Member
Côte d'Ivoire Cabinet du Premier Ministre / Plateforme Nationale de Réduction des Risques et de gestion des Catastrophes (01)		n.a.	Member
Côte d'Ivoire MPD/DGAT (01)		n.a.	Member
Côte d'Ivoire MI/DGDDL (01)		n.a.	Member
Côte d'Ivoire MIRAH/Direction de l'Aquaculture et de la Pêche (DAP) (01		n.a.	Member
Commune Grand-Bassam (01)		n.a.	Member
Commune Jacqueville (01)		n.a.	Member
Côte d'Ivoire Centre of Excellence: CURAT, WASCAL (02)		n.a.	Member
Côte d'Ivoire MCLU DGUF (01)		n.a.	Member
Côte d'Ivoire Convention d'Abidjan (01)		n.a.	Member
Côte d'Ivoire Expert NGO (01)		n.a.	Member
FIRCA			Member
UN-Habitat			Member

The participatory processes, stakeholder engagement and consultations conducted in Ghana have considered sufficient the creation of Regional and National level Project Steering Committees (PSC). The Project Technical Committee has been considered as an additional institutional layer that Ghana aims at addressing as part of the National level Project Steering Committee.

In Côte d'Ivoire, given the more consultative and broader approach to stakeholder engagement, the creation of a Project Technical Committee (PTC) has been requested. The function of the PTC is to provide a technical platform to include additional substantive stakeholders to be consulted on a more regular basis and provide an additional forum other than the national Project Steering Committee, with a more decision-making function. The PTC will be a consultative body whose recommendations will be non-binding and includes as members a broader range of stakeholders: national and local government, government specialised agencies, technical centres, international organizations and NGOs.

In both Ghana and Côte d'Ivoire, The National-level Project Steering Committees have been established, and chairs, co-chairs and members have already been identified and agreed upon. These Committees have already been functioning to support the development of this project proposal, including approving proposed Project Execution Entities, activities, budgets, etc.

Key stakeholders and roles and responsibilities

Regional/ international level

Table 23. Overview main stakeholders and roles and responsibilities at regional/ international level

Stakeholder	Role and responsibility (policy / M&E, implementation, etc)	
	Focus	Project / Supervision modality
Abidjan Convention (ABC) (Executing Entity)	Regional coordination between governments and on conventions, including on Marine and Coastal ecosystems and climate change resilience.	Co-Chair PSC at regional level Execution outputs 5.3. and 5.4 Coordination execution component 5 at national level UN to UN Agreement through UNEP Cote d´Ivoire (to which ABC reports)
University of Cape Coast	Academic expertise on regional climate change and coastal issues	Member PSC at regional level Execution outputs 5.1. and 5.2 Coordination execution component 5 with AbC at national level Supervised and contracted by ABC

National and local level – Ghana

Table 24. Overview main stakeholders and roles and responsibilities in Ghana

Government			
Stakeholder		Role and responsibility (policy / M&E, implementation, etc)	
Main	Sub + Commissions	Government	Project / Supervision modality
Ministry of Environment, Science, Technology and Innovation (MESTI) - Executing Entity	AF DA Environmental Protection Agency (EPA)	Sustainable development (policies and regulatory framework, especially environmental) AF focal point	Member PSC at regional level Chair PSC at national level AF DA – AF focal point EPA – Policy advise and coordination, including ensuring project activities' compliance to national environmental standards ToR for EIMP
	Land Use and Spatial Planning Authority (LUPSA)	Land Use and Spatial Planning	Member PSC at national level Execution component 2, including plans oversight and approval

			Coordination with RCC and MMDA to execute component 2 Agreement of Cooperation (AoC)
National Development Planning Commission (NDPC)		Development planning and strategy (finance and medium-term development plans)	Member PSC at regional and national level Align / coordinate with (+ monitoring) national development planning
Ministry of Local Government and Rural Development (MLGRD)	Regional Coordination Council (RCC)	Good governance and balanced development of Metropolitan / Municipal/ District Assemblies (i.e. decentralisation) (policies and regulatory framework)	Member PSC at regional and national level MLGRD through RCC-MMDAs: Align Mid-term development planning with development of spatial plans (LUSPA)
	Metropolitan, Municipal and District Assemblies (MMDAs) and communities		
Ministry of Water and Sanitation (MWS)	Water Resource Commission (WRC)	Regulate and manage the sustainable utilization of water resources	Member PSC at national level WRC – Policy advise and coordination, esp. related to component 3
Ministry of Works and Housing (MWH)	Hydrological Department Services (HDS)	Programming and co-ordination of coastal protection works, construction and maintenance of storm drains countrywide and the monitoring and evaluation of surface water bodies in respect of floods.	Member PSC at national level HDS – Policy advise, coordination, esp. related to component 3
Ministry of Special Development Initiatives (MSDI)	Coastal Development Authority (CDA)	Spearheading development in coastal regions	Member PSC at national level FC – Policy advise, coordination, esp related to component 2 and 3
Ministry of Lands and Natural Resources (MLNR)	Forestry Commission (FC) (incl. mangroves)	Sustainable management and utilization of Ghana's lands, forests, wildlife and mineral resources for socio-economic growth and development.	Member PSC at national level FC – Policy advise, coordination
Ministry of Fisheries and aquaculture development (MOFAD)	Inland Fisheries Management Division (IFMD) Fisheries Scientific Survey Division (FSSD) Fisheries Commission?	Promotion of accelerated Fisheries Sector Development as a viable economic segment	Member PSC at national level IFMD – Policy advise and coordination
District Assembly of Ada East, Ada West and Anloga/ Keta (Executing Entity)	Technical Department	Supervision, coordination and monitoring of interventions	Support and supervise the execution of component 3 Agreement of Cooperation (AoC) through Ministry of Environment
Non-government			
The Development Institute (DI) (Lead Pre-identified Execution Entity)		Community mobilisation; coastal climate change resilience; gender and youth. Ghanaian non-governmental, not-for-profit sustainable development organization with a branch registered in the United States, Minnesota. It was formed with the goal of creating an enabling environment for empowering Civil Society Organizations and communities to facilitate the linkage between micro and macro levels of society for sustainable development. The Ghana branch became fully operational in 2005 having met all the legal requirements in Ghana.	Member PSC at national level Execution component 3 - Agreement of Cooperation (AoC) to be signed with DI as lead entity for the coordination of component 3 Direct supervision by UN-Habitat Ghana, Cote d´Ivoire and Headquarters
Deltares (Pre-identified Execution Entity)		Deltares is an independent institute for applied research in the field of water and subsurface in five areas: flood risk and high water / adaptative delta planning / infrastructure / water and subsurface resources / environment	Execution component 1 Performance-based contract Direct supervision by UN-Habitat
Keran Group (Pre-identified Execution Entity)		The Keran Group, with offices in West Africa, is a group of 4 companies (SCE, Creocean, Naomis and Groupe Huit) and its subsidiaries, working in the areas of expertise of urban planning, coastline and sea, risk and resilience, water energy and environment Physical works, technical design and execution of component 3	Execution of component 1 and 3 Subprojects on NBS, Mangrove restoration and EWS Direction supervision by DI and overall supervision by UN-Habitat
The Salt Doctors (Pre-identified Execution Entity)		The Salt Doctors is a social enterprise from the Netherlands that specializes in improving crop yield under saline conditions and putting the solutions into the hands of farmers. It is established in West Africa and acts as an execution partner to realize climate resilient agriculture and help farmers to adapt to the ever-increasing salinity levels. Responsible for the execution of component 3 sub-project on salt resilient crops and trainings for communities.	Responsible for the execution of component 3 sub-project on salt resilient crops and trainings for communities Direction supervision by DI and overall supervision by UN-Habitat.

National and local level – Côte d'Ivoire

Table 25. Overview main stakeholders and roles and responsibilities in Côte d'Ivoire

Stakeholder		Role and responsibility (policy / M&E, implementation, etc)	
Main	Sub + Commissions	Government	Project / Supervision modality
Government			
Ministry of Environment and sustainable Development (MINEDD) – *Ministère de l'Environnement et du Développement Durable*	AF DA Agence Nationale de l'Environnement (ANDE) Agence Nationale de Gestion intégrée du Littoral Ivoirien Direction de la Lutte contre le Changement Climatique (DLCC) Programme National du Changement climatique (PNCC) Programme National de Gestion de l'Environnement Côtier (PNGEC)	Sustainable development (policies and regulatory framework, especially environmental) AF focal point	Member PSC at regional and national level AF DA – AF focal point ANDE – Policy advise and coordination, including ensuring project activities' compliance to national environmental standards) Coordinate execution component 2, including plans oversight
Ministry of Interior – Ministère de l'Intérieur (MI) (Executing Entity)	Direction Générale de la Décentralisation du Développement Local (DGDDL) – Collectivite Territorial Direction Générale d'Administration et du Territoire.	Good governance and balanced development of Metropolitan / Municipal / Department collectivities (policies and regulatory framework) Support and approval of plans	Member PSC at regional and national level Ministry of Interior through DGDDL and collectivite Territorial: Coordination and approval of plans Establishment of AoC between IE and the EE of the local governments Agreement of Cooperation (AoC)
Ministry of Planning and Development – Ministère du Plan et du Développement (MPD) (Executing Entity)	Direction Générale d'Aménagement du Territoire (DGAT)	Planning development	Member PSC at regional and national level DGAT – Coordinate execution component 1, including plans oversight and approval (support the development of local plans (Plan de Development local and development of Manuel de planification du développement et guide pratique de planification locale) Agreement of Cooperation (AoC)
Ministry of the City- *Ministère de la Ville*		Assistance and advise to cities; Development and approval of urban planning tools, liaising with Ministry of Plan and Ministry of Construction.	Member PSC at national level Policy advise and coordination, including development and approval of urban planning tools.
Ministry of Construction Housing and urban planning – Ministère de la Construction, du Logement et de l'Urbanisme (MCLU)	Direction Générale de l'Urbanisme et du Foncier (DGUF) Direction du logement et de la Copropriété	Planning development	Member PSC at national level DGUF - Policy advise and coordination, including development and approval of urban planning tools
Ministry of Agriculture and Rural Development – Ministère de l'Agriculture et du Développement Rural (MAD)		Sustainable management and utilization of Côte d'Ivoire's Agriculture lands for socio-economic growth and development.	Member PSC at national level Policy advise and coordination Member PSC at national level Policy advise and coordination
Ministry of Tourism and Recreation – *Ministère du Tourisme et Loisir (MTL)*			Member PSC at national level Policy advise and coordination
Ministry of water and forests- Ministères des eaux et Forêts (MF)		Sustainable management and utilization of Côte d'Ivoire's forests, wildlife and Water resources for socio-economic growth and development.	Member PSC at national level Policy advise and coordination
Min de l'Int ; Collectivité Territoriale (Mairies and Conseil Régional) - Jacqueville and Grand-Bassam (Executing Entity)	Direction des services techniques Department of Public Works	Planning Development Local government: Coordination, stakeholder engagement, participatory processes, community engagement, execution oversight and control	Coordinate execution component 2 Plans de Développement Local, Schémas Régionaux d'Aménagement du Territoire (Liaising with relevant ministries) Coordinate execution, validation and execution support of component 3 Agreement of Cooperation (AoC) through the Ministry of Interior and DGDDL Agreement of Cooperation (AoC)
Non-government			
CURAT: Centre of Excellence - University for Research and GIS - University Félix HOUPHOUËT-BOIGNY		Coastal climate change issues – Elaboration of Coastal and climate change studies	Member PSC at national level Partner Abidjan Convention to execute component 1 at national level Agreement of Cooperation with ABC Direct supervision by ABC and overall supervision by UN-Habitat
Impactum (Lead Pre-identified Execution Entity)		Non-Governmental Organization in Cote d´Ivoire engaged in sustainable development programs, the fight against global warming and the preservation of the	Member PSC at national level Execution of Component 3 and direct supervision of all EE in CdI.

	environment. It focus in the areas of agronomy and forestry, agroeconomics, climate change, water management, land use, social engagement, evaluation and communication	Working arrangement through Agreement of Cooperation (AoC) with UN-Habitat Directly supervised by UN-Habitat Office in Cote d´Ivoire and Headquarters
Deltares (Pre-identified Execution Entity)	Deltares is an independent institute for applied research in the field of water and subsurface in five areas: flood risk and high water / adaptative delta planning / infrastructure / water and subsurface resources / environment	Execution component 1 Performance-based contract Direct supervision by UN-Habitat
Keran Group (Pre-identified Execution Entity)	The Keran Group, with offices in West Africa, is a group of 4 companies (SCE, Creocean, Naomis and Groupe Huit) and its subsidiaries, working in the areas of expertise of urban planning, coastline and sea, risk and resilience, water energy and environment Physical works, technical design and execution of component 3	Execution of component 1 and 3 Subprojects on NBS, Mangrove restoration and EWS Performance-based contract Direction supervision by NGO and overall supervision by UN-Habitat
FIRCA (Pre-identified Execution Entity)	The Interprofessional Fund for Agricultural Research and Advice (FIRCA), was created by decree No. 2002-520 of December 11, 2002. It is an instrument inspired by the provisions of law No. 2001-635 of October 9, 2001 establishing the Agricultural Development Fund (FDA). The FIRCA ensures, in the sectors of plant, forestry and animal production, the financing of the programs for research and knowledge management	Execution of component 3 Subproject on Salt Resilient Crops – knowledge management, trainings and finance Agreement of Cooperation (AoC) Directly supervised by NGO and overall supervision by UN-Habitat
The Salt Doctors (Pre-identified Execution Entity)	The Salt Doctors is a social enterprise from the Netherlands that specializes in improving crop yield under saline conditions and putting the solutions into the hands of farmers. It is established in West Africa and acts as an execution partner to realize climate resilient agriculture and help farmers to adapt to the ever-increasing salinity levels.	Responsible for the execution of component 3 sub-project on salt resilient crops and trainings for communities Performance-based contract Direction supervision by NGO and overall supervision by UN-Habitat

The supervision of the EE will be done through the Regional Unit of the project as well as the two National Units of the project in Ghana and Côte d'Ivoire, with dedicated coordination, technical, administrative and M+E staff. From the kick-start phase of the project the regional and local units will count with the support of UN-Habitat Headquarters in Nairobi and Regional Office of Africa in Senegal, to support with contractual arrangements, contracts, procurements, disbursements, etc. UN-Habitat has a country office both in Ghana (Accra) and Cote d'Ivoire (Abidjan).

The contractual arrangements with the different EE are presented in Table 24 and Table 25. UN-Habitat will establish relations with EE mainly through Agreements of Cooperation, UN to UN Agreements and Performance-based contracts. Procurement of EE will be done through competitive procurement process, according to United Nations regulations. EE have been pre-identified for the different components and subprojects.

Following a request from country Ministries and executing government institutions, UN-Habitat will exceptionally execute Output 2.2.1.

Legal and financial arrangements

Ministries and institutions of Ghana and Cote d' Ivoire have signed commitment letters for their engagement in the project. Upon project approval, UN-Habitat and the Ministries of Environment (with the AF DAs) in Ghana and Côte d'Ivoire will sign a joint **Memorandum of Understanding** to which this Project Document will be attached, to ensure that all partners are fully committed to the project.

UN-Habitat will contract Project Execution Entities in Ghana and Côte d'Ivoire through **Memorandum of Understanding (MoU) and/ Agreements of Cooperation (AoC)**, which are legally binding financial tools, and **UN to UN agreement** to the Abidjan Convention. The Agreement of Cooperation will be drafted by the Regional Project Supervision Unit in collaboration with UN-Habitat Regional Office for Africa (ROAf) and cleared by UN-Habitat's HQ. For the UN-to-UN agreements, overheads will be passed through from the 7 percent PSC from the project cycle management fees, so there will be no double charges.

To contract a UN agency, UN-to-UN agreements are used. This is also the case if a UN implementing entity contracts a UN agency as executing entity. A fixed mechanism of these UN-to-UN agreements is that a certain percentage (over the executed outputs) of the overhead (MIE fee) is passed through to the contracted entity. This means no double overheads are calculated but that overheads are deducted from the managing agency.

UN-Habitat's **Implementing Partner Management Process (IPMP)** will be used to align with policies, procedures and templates to use in the selection and management of Implementing Partners contracted by UN-Habitat through Agreements of Cooperation (AoC) to execute projects. The IP Management process defines the 18 steps from planning to evaluation through which UN-Habitat engages with Project Execution Entities.

Private sector procurement will follow the rules and regulations of the United Nations. The contractual relation with the private sector company will be based on Performance-based contracts.

Direct Executing Entities will be allowed, upon agreement with IE, to establish collaborations and contractual relations with public sector, private sector and NGOs for the specific fulfilment of components of the project and within the assigned budget.

The Regional Project Supervision Unit will develop an operational manual that clearly outlines the roles and responsibilities of the key project stakeholders and contain all the necessary tools, forms and templates required to administer the project. The operation manual will be shared with the National Project Coordination Units for inputs. While UN-Habitat takes responsibility of audits in line with AF requirements (each year), all contractors will be required to have 'external' audits of their budgets. The contractors will also be required to support the independent final evaluation.

Roles and responsibilities for environmental and social risks management / AF ESP and GP compliance

The Regional Project Supervision Unit (RPSU) will be responsibility for environmental and social risks management, including implementation of the Project ESMP (see Annex 6). An AF and UN-H policies and reporting compliance expert will be part of the RPSU. This expert will also supervise Project Execution Entities on the implementation of the Project ESMP. Guidelines showing how to comply to the AF ESP and GP will be shared with all execution entities and they will be guided on process, including monitoring. A Safeguarding system compliance expert will also be part of the RPSU. Monitoring staff part of the RPSU will require having expertise in social risk management and be familiar with the AF safeguarding system. The RPSU will be backstopped by UN-Habitat HQ, with experts on climate change, human rights, environmental and social risks managements and gender policies. UN-Habitat has rolled out its Environmental Social Safeguards System 3.0 at the institutional and project level. A dedicated ESSS Officer as well as an ESSS implementation team will additionally support the role of RPSU and NPCU.

In both Ghana and Côte d'Ivoire, government stakeholders responsible for compliance to national environmental and social policies and standards will be part of the Regional- and National-level Steering Committees, as well as government gender focal points.

All project-related ToR's and contracts will include clauses stating contractors will need to comply to the AF ESP, especially principle 1 (law), 4 (human rights), 5 (gender), 6 and 13 (labour and safety) and the AF GP.

Adaptive management: when changes in project activities or additional activities are required, these will need to go through a new risks screening and impact assessment process in compliance with AF, UN-Habitat and national policies and standards. When this is required, this will be led by the RPSU and the Regional-level Project Steering Committee would need to approve the changes.

Launch of the project

At the launch of the project, UN-Habitat's, together with the UNEP Abidjan Convention will organize **an inception workshop** inviting members of the Regional-level Project Steering Committees, Execution Partners and other key stakeholders. The project approach and the proposed outputs and outcomes of the project will be presented and discussed with the purpose to solicit feedback and inputs in a participatory manner. Comments and feedback will be incorporated in project frameworks and workplans. The Inception Workshop aims to:

A. Enhance participants' understanding of the project objectives and activities and take ownership of the project.
B. Discuss and confirm the organizational structure of the project, including roles and responsibilities.
C. Confirm / agree upon project monitoring framework and workplan.
D. Confirm / agree upon project risks management framework.
E. Discuss and agree upon project knowledge management framework and plan.
F. Confirm / agree upon the project Environmental and social Risks Management Plan.
G. Agree on the annual work plan for year one.

The inception workshop will be organized within three months after signing the project agreement between the Adaptation Fund and UN-Habitat.

PART III.B MEASURES FOR FINANCIAL AND PROJECT RISK MANAGEMENT

Under guidance of the regional project manager, supported by the National Project coordinators, Monitoring Officers will monitor the status of financial and project management risks, including those measures required to avoid, minimize or mitigate these risks, throughout the project (please see also Section Part III.D).

The table below gives an overview of overall potential project management and financial risks, an assessment of the significance of the pertaining risks in terms of likelihood and impact and outlines measures that have been embedded in the project design in order to manage and/or mitigate these risks.

Table 26. Overview of financial and management risks and measures to mitigate these

Potential risks	Likelihood (1-5)	Impact (1-5)	Mitigation measures	Indicator to verify
Institutional				
1 Delay of project start-up because critical staff is not in place and / or lengthy contracting process, incl. negotiations with execution entities	3 Med	3 Med	1.1 UN-Habitat appointed critical staff at UN-H Regional Office for Africa (ROAf) and Urban Practices Branch (UPB) to start the process required to start the project, incl. putting project staff in place and preparing the inception workshop immediately after signed project agreement between UN-Habitat and the AF; 1.2 Most execution entities have been identified and proposed project activities and budgets have already been agreed upon. 1.3. UN-Habitat commits to organise the inception workshop within three months of the signed project agreement between UN-Habitat the AF 1.4. Recruitment of project staff is initiated prior to project inception as well as the drafting of TORs, procurements and logistics (travel and office space)	- The inception workshop was organised within three months of the signed project agreement between UN-Habitat; - Execution entities to execute activities in the 1st project year are contracted within six months after the inception workshop
2 Loss of government support (at ministerial and municipal level) for the project and activities because of elections and related functions of the project steering committee, which may result in lack of prioritization of AF project activities or different pace of execution of activities in Ghana and Côte d'Ivoire	1 Low	3 Med	2.1 National Project Steering Committees (PSCs) have already been formed during the project preparation phase and these have approved proposed project activities and budgets, etc. This shows a participatory and inclusive project design process took place with ownership of the project as a result. If due to elections, new members of the PSCs will need to be selected, this will be requested by UN-Habitat and AF DA as soon as possible and records of decisions made during earlier PSC will be shared. 2.2 Delays in one country don't have to result in delays in the other country because of functioning national PSCs 2.3 UN-Habitat will establish agreements with the MoE (with appointed AF DA) (through MoUs) to ensure government lead and coordination.	- Confirming steering committee members and roles and responsibilities during inception workshop + report - Government focal point to coordinate SC appointed at inception workshop - MoU signed within 6 months six months after the inception workshop
3 A lack of coordination between and within national government Ministries and Departments and municipalities	1 Low	3 Med	3.1 Regional and National PSCs are to ensure coordination. Representatives from the target municipalities are members of both regional and national PSC. A technical committee is also established 3.2 Roles and responsibilities related to project implementation of PSC members, also for operation, maintenance and sustainability of activities, have already been identified and focal points within the ministries and municipalities will be appointed through an official letter. 3.3 Should UN-Habitat observe coordination problems, the agency will try to resolve issues directly with government focal point and / or concerned parties	See above
4 Capacity constraints of executing entities, local institutions, communities and the	1 Low	3 Med	4.1 The project has a strong capacity building and training component (component 2), designed to operate, maintain, sustain and replicate project activities, esp. at the community level	- Capacity building indicators to be established - Critical staff as

private sector may limit the effective implementation of interventions			4.2 UN-Habitat will have dedicated project staff with expertise in spatial / urban planning, climate change, community organization and technical design, M&E and safeguards to ensure quality control from UN-Habitat side.	mentioned being part of project staff
5 Communities may not adopt activities during or after the AF project, including infrastructure maintenance	2 Low	4 High	5.1 A strong participatory approach at the community level is used and will be used (component 2) during project implementation to ensure ownership and support of communities to the realised interventions in the targeted project areas. UN-Habitat works with NGOs partners already well established in the target area, to build on relations already established. 5.2 Capacity building and training of communities will be undertaken to improve their awareness and understanding of the benefits of the activities, including operation and maintenance of concrete interventions (component 2).	See above
6- Planning outcomes of components 1 and 2 may be ineffective	1 Low	3 Med	The planning processes and outcomes are leaded by the respective Ministries in each country with the mandate for elaboration of territorial and local plans, with a strong political support and an agenda to develop, approve and implement plans. The Ministries have access to detailed information on land ownership through the District Assemblies and technical services. The larger aim of the plan is approval and also to build consensus and stakeholder engagement, and to develop a vision and prioritize an agenda of investments in climate change adaptation and urban development. The planning process itself is also critical, since it allows for the creation of partnerships and governance structures that will ensure plan implementation with mainstreaming of CC adaptation. In this sense, the success of the plans will be achieved not only through the ends, but also through the means. During the participatory process, a vision, strategies, expected outcomes and concrete interventions will be developed that will multiply the impact of the projects and activities part of components 3 and 4. The plans aim at creating realistic consensus and this will be developed using the Participatory Incremental Urban Planning Methodology of UN-Habitat, Our City Plans, successfully implemented in over 30 countries. In order to reduce the risks both Governments have asked UN-Habitat to support the capacity development process and support the design, operationalization and implementation of the plans, following a long track record of plans developed in collaboration with national and local governments.	- Written commitment of Ministries Written commitment of Local governments - Support of UN-Habitat and capacity development function
Financial management and Requisite Institutional Capacity				
6 Complexity of financial management and procurement. Certain administrative processes could delay the project execution or could lack integrity or needed capacity	2 Low	2 Low	6.1 Financial management arrangements have been defined during project preparation, including identification of most executing entities, which already agreed on the activities and budgets (see also 1.2. above); 6.2 UN-Habitat's control framework, under the financial rules and regulations of the UN secretariat, will ensure documentation of clearly defined roles and responsibilities for management, internal auditors, the governing body, other personnel and demonstrates proof of payment / disbursement; In line with AF and UN-Habitat policies, audits will take place annually and / or for each contract of USD 500k. 6.3 Activity specific procurement will be managed by the executing entities as agreed through standard Agreements of Cooperation (with relevant conditions, incl. evidence of recognized procurement policies and procedures and specific terms and conditions for timely disbursement of funds for project activities while at the same time ensure provisions on good financial management, hence minimizing the risk of fund mismanagement or corruption). The RPMU has a certifying role (for key procurements / expenditures).	- Timely audit reports (inception and yearly + following UN-H regulations) - Timely evidence of recognized procurement policies and procedures provided by Execution Entities
7 Inflation and instability of the national currency leading to budget issues and increased prices for infrastructure delivery	3 Med	1 Low	7.1 All budgets will be in US$ 7.2 Include clauses in all contracts, incl. with private sector, that they cannot increase the costs during the project duration.	- All budgets in US$ - Clauses in all contracts, incl. with private sector, that they cannot increase the costs during the project duration.
Physical				
8 Covid-19 protocols restrict movement in the target areas	3 Med	4 High	8.1 UN-Habitat will only let field work proceed if agreed with the UN security unit. 8.2 Execution entities will require having permanent field staff at project sites, reducing the need to travel 8.3 If target areas are not accessible, UN-Habitat and the proposed execution entities will identify alternative intervention timelines and or priorities in coordination with the SC	- Permanent field staff at project locations
Environmental				
9 Poor weather conditions affect implementation of activities and sudden	2 Low	1 Low	9.1 UN-Habitat and the proposed execution entities have developed their work plan according to expected weather conditions and most activities should be able to be carried out despite severe weather conditions as they are inside closed areas. If unexpected weather patterns occur, the	- Work plans avoiding critical concrete works being planned in winter

major changes in the environment.			proposed activities and work plan will be reviewed to make practical adaptations.	
10. potential risk of sudden major changes in the environment.	1 Low	3 Med	10.1. Project activities will be planned in the 'calm' season so that major changes will not impact 'works' 10.2. The project prioritized NBS and integrated grey and NBS solutions, which are adaptable to new environments. Potential risks will be identified, also through risks planning, and the design of activities will anticipate changes in the environment.	- Annual plans - Operation and maintenance plans showing potential risks and how interventions will be protected and recovered from storms and floods

As for any potential conflict of interest with the involvement of private partners in the development of the proposal, UN-Habitat has a long-term institutional partnership with earlier mentioned Arcadis to provide UN-Habitat with pro-bono support. This is a non-remunerated activity Arcadis developed through its Shelter Programme. The institutional partnership is regulated by an Agreement of Cooperation (AoC) which states that in countries where Arcadis is involved in a preparation of a project with UN-Habitat, Arcadis cannot be contracted to execute any remunerated activities that are linked or could be derived from the collaboration with UN-Habitat.

PART III.C MEASURES FOR ENVIRONMENTAL AND SOCIAL RISK MANAGEMENT

Section II.L presents (in a synthetic format) outcomes of a systematic screening and impact assessment process detailed in Annex 5 and that has been done based on information from consultation with national and local government stakeholders, site visits, local and international experts, a wide range of other concerned stakeholders as well as the target communities (emphasizing equity and the inclusion of marginalized and vulnerable groups). As shown in Part II Section I and in the related Annex 4, consultation with communities focused on: 1) identification of activities / interventions that address the climate change vulnerabilities of specific groups; 2) identification of exact needs, issues and risks following the 15 Adaptation Fund's environmental and social principles; and 3) identification of risk mitigation measures where required. Annex 4 contains the detailed outcomes of these consultations.

As described in section II.L, based on a screening against the stipulated principles in the AF ESP, the project has been categorized as a B Category risk project. An Environmental and Social Risk Management Plan has been developed (see Annex 6) to ensure that risks are avoided, and that, where this is not the case, they are detected in a timely manner and appropriately mitigated. The ESMP lists all potential risks identified and the measures to avoid or mitigate potential adverse environmental and social impacts. The plan also shows how these potential risks and mitigation measures will be further monitored, including delegating responsibilities.

The essence of the ESMP entails risks management arrangements, such as Roles and **Responsibilities, Adaptive management,** Arrangements to supervise executing entities for implementation of ESMP, Budget provision to manage environmental and social risks / implement of the ESMP, Measures to avoid, minimize, or mitigate potential risks (presentation of the overall ESMP), Risks monitoring system/indicators, and Grievance mechanism.

The ESMP is designed with the understanding that any changes to project activities are subject to the established process with the Adaptation Fund Secretariat and will comply with the requirement of the IE informing the secretariat and the designated authority of changes in project activities or associated indicators or targets, including introductions, modifications and deletions, as soon as possible (decision B.29/32), by:

- obtaining prior approval from the Board;
- communicating such changes to the secretariat; and
- submitting a letter from the designated authority endorsing such changes to the secretariat, in order to obtain such approval.

General environmental and social risks management reduction measures:

In addition to the risk management measures identified below, the following elements will be put in place to ensure compliance with the ESP:

- all MoUs and Agreements of Cooperation with executing entities will include detailed reference to the ESMP, GP, the 15 ESP Principles and especially compliance to law (Principle 1), human rights (Principle 4), gender approach (Principle 5) and labour and public health standards (Principles 6 and 13).
- the UN-Habitat Human Rights Officer and the Project Appraisal Group will check project compliance to the AF ESP during the project (in addition to the Senior Human Settlements Officer) (Principle 4)

- continuous coordination with focal points within ministries and municipalities, responsible for compliance to national and local standards (especially related to EIAs and GP), will take place.
- capacity-building and awareness-raising: the management teams, executing entities and target communities, will receive training / capacity development to better understand and be able to manage the 15 Principles, the ESMP and their responsibilities. This will be completed during the inception phase.

Table 27. ESP and GP compliance requirements and how the proposal complies to these requirements

ESP and GP compliance requirements	Project compliance to the AF ESP and GP	Reference / evidence
Have all potential environmental and social risks been identified for *all* project/programme activities prior to funding approval?	All potential environmental and social risks (incl. for gender and considering their significance) have been identified) for all project/programme activities at the project preparation phase. In both Ghana and Côte d'Ivoire, accredited consultants prepared country specific ESIAs, ESMPs and consultations reports in compliance with the AF ESP and GP and national requirements for conducting ESIAs; Outcomes have been consolidated in the proposal.	Part II.I Part II.L Annex 6 (ESP) Annex 5 (GB)
Has the environmental and social assessment been completed before the project/programme proposal submission to the Adaptation Fund, and its findings included in the proposal document?	In compliance with the AF ESP and GP and national requirements for conducting ESIAs, above reports have been reviewed and approved by the Ghana and Côte d'Ivoire ministries of environment. Outcomes have been consolidated in the proposal.	*Ghana ESIA-ESMP report* and *Côte d'Ivoire ESIA ESMP report.*
Has an ESMP been developed and does this include safeguard measures to be implemented during a project/programme?	A project ESMP has been developed, including safeguarding measures. The following has been included in the ESMP: - Allocated roles and responsibilities environmental and social risk management / implement of the ESMP - Opportunities for adaptive management - Arrangements to supervise executing entities for implementation of ESMP - Budget provision to manage environmental and social risks/ implement of the ESMP - Measures to avoid, minimize, or mitigate potential risks - Risks monitoring system / indicators - Grievance mechanism	Part III.A (roles and responsibilities for env. and social risk management) Annex 6 (ESP)
Will a grievance mechanism be put in place and how will it be made widely known to identified and potentially affected parties.	A project grievance mechanism will be put in place, as described in the ESMP. It will be made widely known to identified and potentially affected parties through community mobilisers, posters, and online content	Annex 6 (ESP)

Table 28. Gender AF GP Principles compliance by the project activities

Component	Gender Objective	Adaptation Fund GP Principle	Related action
1. Improved coordination of local and national governments in the Region to cope with climate change, to integrate major infrastructural projects in their spatial strategies, and to learn from each other in order to face common transboundary cc-related hazards	To improve gender balance build capacity at regional, national and local level in the decision making on climate change adaptation.	Gender balance, gender equality and gender equity	Support national, regional and local meetings, training and cross-fertilization activities for sharing lessons learned and best practices, promoting gender equality at different levels.
2. Strengthened role of national adaptation plans in the spatial planning practice at national and sub-national level and improved capacity of governments in adapting to cc	To tackle gender imbalance in the planning practice at national and sub-national level	Gender equality, gender equity and gender mainstreaming	Participatory process ensuring that women's voices as important actors are heard.
3. Municipal staff, communities and local stakeholders have successfully planned and implemented priority sub- projects to cope with climate-change related issues, such as sea level rise and floods, and access to climate-resilient livelihoods	To improve women empowerment and tackle gender imbalances from project design to implementation To generate job opportunities, focus on women	Women empowerment and gender equity	Support women and youth groups including in different subproject activities Provide competitive small grants targeting small farmers and women association to undertaken actions among different subprojects Develop gender responsive and strategies on including women, youth, and vulnerable groups in subproject training

PART III.D ARRANGEMENTS FOR MONITORING, REPORTING AND EVALUATION

M & E Framework and plan

Monitoring and Evaluation (M & E) arrangements for this project will be in compliance with the AF M&E guidelines and ESP and GP and with UN-Habitat M & E policies and guidelines. This means, as a minimum, the following will be monitored and evaluated: project Milestones, Financial data, Procurement data, Risks assessment, ESP Compliance, GP Compliance, Project indicators, Lessons learned, project Results. The M

& E of progress in achieving project results will be based on targets and indicators (also for gender) established in the Project Results Framework (see Part III.E).

The annual project performance reports (PPRs) will include a section on the implementation status of any environmental and social management plan, including those measures to avoid, minimize, or mitigate environmental and social risks, also focusing on monitoring gender risks. The reports shall also include, if necessary, a description of any corrective action that are deemed necessary. The terminal evaluation report will include an evaluation of the project's performance with respect to environmental and social risks.

UN-Habitat will ensure timely and high-quality M & E by keeping oversight of the process by providing guidance to the Project Execution Entities and national government partners through full briefing of M & E requirements. Where possible, the M & E process will be participatory, involving key stakeholders at national, municipal and communities. Project activities will be monitored by the RPSU and NPCUs with dedicated monitoring staff, which will require having expertise of M & E compliance to the AF ESP and GP. The M & E framework and plan will also need to be endorsed by the Regional-level Project Steering Committee. Audits of the project's financial management will follow AF regulations and rules and applicable audit policies. The M&E plan will be implemented as proposed in the table below.

Table 29 M & E plan

Type of M&E Activities	Responsible Parties	Time Frame	Reporting
Inception Workshop and Report	UN-Habitat & Regional project coordinator Coordinated with: Abidjan Convention and Regional-level Steering Committee	Workshop: within first three months of signing between AF and UN-Habitat Report: within one month after inception workshop	Inception Report, including 1st year workplan, monitoring framework and plan; project risks management framework and plan; environmental and social risks management framework and plan; knowledge management strategy
Periodic status/ progress reports	UN-Habitat & Regional project coordinator Coordinated with: NPCUs and Project EE and IOIS	Annually	Annual Report, mid-term, final
Compliance with ESP and GP		Annual, as well as upon receipt of complaints, grievances or queries	Annual Report, mid-term, final
Audits		As per AF (annually)	Audit Reports
Terminal project performance report		No later than one months after project completion	Terminal project performance report
Final Evaluation	UN-Habitat & Regional project coordinator. Coordinated with: External consultants and NPCUs, Project EE	No later than three months after project completion	Final Evaluation Report
Community consultations/ workshops/ trainings, etc.	Project EE Coordinated with: NPCUs	Within one week after each event	Documentation
Visits to field sites	Abidjan Convention Coordinated with: UN-Habitat & Regional project coordinator and Regional-level Steering Committee	At least every year	Field visit Report
Video with 'before' and 'after' the project	UN-Habitat & Regional project coordinator Coordinated with: Abidjan Convention and Regional-level Steering Committee	Video one: before start of concrete interventions Video two: after completion concrete interventions	Video compilation of project results

For the M & E budget and a breakdown of how MIE fees will be utilized in the supervision of the M & E function, please see the detailed budget (Part III.G). For related data, targets and indicators, please see the project proposal results framework (Part III.E).

M&E Activities

- *Inception workshop and Project Steering Committee meetings*

During the first Regional-level Project Steering Committee meeting, which will be organized in conjunction with the project Inception Workshop. The Committees will monitor / review project progress and provide technical guidance. During the first Regional-level Project Steering Committee meeting, the following will be reviewed: the project organizational structure, includes roles and responsibilities, the project monitoring framework and workplan, the project risks management framework, the project knowledge management framework and plan, the project Environmental and social Risks Management Plan and annual work plan for year one. The Regional-level Project Steering Committee will meet every year and the National Project Steering Committees will meet every six months, and ad-hoc meetings will be held as needed.

- *Periodic project monitoring and terminal project performance reporting*

Annual project performance monitoring will be conducted using the AF PPRs template. This will include monitoring of project: Milestones; Financial data; Procurement data; Risks assessment; ESP Compliance; GP Compliance; Project indicators; Lessons learned; Project Results

- *ESMP implementation monitoring*

The implementation of the project Environment and Social Management Plan as described in Annex 5 will be monitored. The ESMP includes monitoring indicators and responsibilities for identified potential risks, impacts and mitigation measures. A dedicated budget for monitoring the compliance to the AF ESP and GP has been included in Part III.G

- *Financial Audits*

A professional, certified and independent organization will review the financial management of the project and adherence to required standards and regulations.

- *Final Evaluation*

No later than three months after the project completion, a final evaluation will be conducted following AF and UN-Habitat policies and guidelines. It will be conducted by an independent team of international and national experts in consultation with executing entities and national stakeholders as a participatory process, including a gender perspective.

- *Community Level Participatory Monitoring*

Part of the detailed project monitoring framework and plan will be identified through activities to involve Project Execution Entities and beneficiaries at the community level in monitoring activities. This would include community-level monitoring of Gender and Youth responsiveness and impact of the project.

- *Periodic Project Site Visits*

Members of the Regional-level Project Steering Committee and representatives of UN-Habitat will visit project sited and hold meetings with the local stakeholders to monitor the implementation of project activities.

- *Video with 'before' and 'after' the project*

Also, as part of the knowledge management strategy and plan, a video recording project results will be produced using 'birds' eye' views and recording of project activities and beneficiaries

Reporting

- *Inception Workshop and Report*

Within one month after the inception workshop, an Inception Report will be submitted to the AF and project steering committees' members. Reports will include: (i) agreement on organizational structure of the project, including roles and responsibilities; (ii) monitoring framework and workplan; (iii) project risks management framework; (iv) knowledge management framework and plan; (v) Environmental and social Risks Management Plan; (vi) year one work plan.

- *Annual project performance reports, including final report*

The Annual project performance reports, which will be submitted to the AF, will include:

- Milestones
- Financial data
- Procurement data
- Risks assessment
- ESP Compliance
- GP Compliance
- Project indicators
- Lessons learned
- Project Results

- *Community Level Meeting /Workshop / Training Reports and site visit*

Reports on all community-level meetings, workshops, and training will be prepared by Project Execution Entities within one week of the event. Photo documented site visit reports, also to monitor women participation, will also be prepared by Project Execution Entities.

- *Final Evaluation Report*

The Final Evaluation report will be in line with AF and UN-Habitat evaluation policies and guidelines and norms and standards for evaluation in the UN system.

PART III.E PROJECT PROPOSAL RESULTS FRAMEWORK

Table 30. Project results framework with indicators, their baseline, targets, risks & assumptions and verification means.

Expected Result	Indicators	Baseline data	Targets	Means of verification (where and how)	Assumptions (external factors or risks)	Frequency of verification	Responsibility
Project component 1: Improved coordination of local and national governments in the Region to cope with climate change, to integrate major infrastructural projects in their spatial strategies, and to learn from each other in order to face common transboundary cc-related hazards							
Outcome 1.1. Improved coordination among governments to adapt to climate change and to implement effective coherent measures for climate change adaptation at regional level	• **Number of trainings and reports**	**0**	**16 events (8 at regional and 8 at national level).**	**Verification of the institutions that have participated of trainings and developed reports**	**Assumption: Decision-makers at all levels and key sectors are willing to collaborate to promote climate change mitigation and adaptation through capacity building, trainings, physical interventions and awareness raising.** **Risk: new unexpected challenges due to the sanitation measures (pandemic)**	**1/year**	**National and Regional government and District assemblies**
Output 1.1.1. Set up **a work plan** with the Abidjan Convention for the initiatives and events to mainstream (live and digitally) lessons learned and to boost capacity to adapt to climate change	Workplan with: • Description of regional and local initiatives (forums, events, etc). • Time plan • Focal points and roles	0	1 workplan	Workplan should be shared with the Abidjan Convention in a year basis.	Assumption: There is a political will to to mainstream climate change considerations into planning and programming in a timely manner Risk: lack of capacity and coordination between local and sectoral authorities for effective implementation of the municipal plans and prioritizing climate change	1/year	UN-H in cooperation with EE and government
Output 1.1.2. Roundtables for **regional bodies and national** governments (through the Abidjan Convention platform) to **agree on spatial strategies** for a coordinated implementation of climate change adaptation	• No of roundtable discussions • No entities attending • No of Reports of Spatial Strategies recommendations to inform the Output 1.1.1 • No of people attending each event and being informed with above adaptation measures disaggregated by: ○ Community ○ % women ○ % youth	0 0 0	16 roundtables (8 at regional and 8 at national level). Regional and National government 16 reports W: 40% Youth: 15%	Verification of meetings held Verification of attendance list Report should be shared through the Abidjan Convention	Assumption: Decision-makers at all levels and key sectors are willing to collaborate to promote climate change mitigation and adaptation through capacity building, trainings, physical interventions and awareness raising. Risk: lack of capacity and coordination between local and sectoral authorities for effective implementation of the municipal plans and prioritizing climate change.	1/year	UN-H in cooperation with EE and government
Output 1.1.3. Regional Assessment identifying key **common challenges**, climate-**change hotspots and priority areas** (including trans-boundary issues) and recommendations for climate change adaptation at different scales	• No of Regional Assessment Reports listing and spatially mapping key challenges, regionally and identifying actions to be taken at the different scales.	0	2 reports	Report should be shared through the Abidjan Convention	Assumption: relevant institutions that deal with community resilience have been identified and are interested. Risk: lack of capacity of staff to develop the assessment report identifying risk and recommendations in alignment with climate adaptation indicators.	Baseline and end	UN-H in cooperation with EE and government
Outcome 1.2. Capacity-building events and knowledge sharing trans-boundary activities among the participating countries are discussed and prepared though the Abidjan Convention for: **i) sharing among the different countries experience-based adaptation mechanisms for replication.** **ii) training of national governments.** **iii) participation to global events.** **iv) support national governments in**	• **Number of events (trainings) and reports.**	**0**	**16 events (8 at regional and 8 at national level).**	**Verification of the institutions that have participated of trainings and developed reports**	**Assumption: relevant institutions that deal with community resilience have been identified and are interested.** **Risk: new unexpected challenges due to the sanitation measures (pandemic)**	**1/year**	**UN-H in cooperation with EE and government**

including coordinated regional level adaptation measures							
Output 1.2.1. Trainings for **regional bodies and national** governments (through the Abidjan Convention platform) for increasing **capacity** of the use of data and tools to foresee and manage climate change-related risks and impacts	No. of national and district-level government staff trained, disaggregated by: • National level • District level • % Women No. of reports	0 0 0 0	240 (80/year) 240 (80/year) 40% 16 reports (1/event)	Meeting and training reports with count of people trained. Photos of trainings. List / count of targeted institutions on training reports.	Assumption: staff will be actively engaged in the trainings. **Risk: new unexpected challenges due to the sanitation measures (pandemic).**	**1/year**	UN-H in cooperation with EE and government
Outcome 1.3. Cross-fertilization activities for mainstreaming lessons learned and best practices captured through the implementation of community plans and sub-projects are mainstreamed among local communities in partnership with the Abidjan Convention as regional knowledge management platform	• **No of events at which project lessons have been shared** • **No of people attending each event and being informed with above adaptation measures disaggregated by:** ○ **Community** ○ **% women** ○ **% youth**	**0** **0**	**20 events/ year (10 in Ghana and 10 in CDI)** **30** **W: 40%** **Youth: 15%**	**Calculate number of events at which presentations with lessons learned have been shared (through presentation, video or guidelines)** **Verification of attendance list**	**Assumption: Need to identify events at which lessons learned are shared and No people informed.** **Risk: cultural perceptions are strong and limit women engagement.**	**1/year**	**UN-H in cooperation with EE and government**
Output 1.3.1. Cross-fertilization **events** to mainstream at local level experiences from community plans and implementation of sub-projects all over the region	• No of meetings at which presentation with best practices is presented at international meetings. • No of Good Practices Guidelines of natural climate adaptation solutions, published and shared online (at least two websites) • 1 Project video showing results developed and shared online (at least two websites).	0 0 0	1 1 2	Guidelines should provide information on how to replicate effective and efficient building-with-nature adaptation measures. Guidelines and video should be published online. Project video should show process and results of activities.	Assumptions: good practices identified in events can reach target populations if shared guidelines and videos are if also shared online. Risk: limited connectivity can be a barrier for sharing with local members the lessons and guidelines.	**1/year**	UN-H in cooperation with EE and government
Component 2: Strengthened role of national adaptation plans in the spatial planning practice at national and sub-national level and improved capacity of governments in adapting to cc							
Outcome 2.1. Sub-national and district/department level spatial development framework	• **SDFs developed for Ghana and Côte d'Ivoire with climate change related maps.** • **No of risks maps with identified hazard prone (coastal erosion / inundation / flood and salinization risks) areas in SDFs (one map per SDF)** • **No of maps with identified areas suitable (at low risks) for development in SDFs (one map per SDF)** • **No of maps with identified cc impacts / vulnerabilities (esp. on communities, ecosystems and livelihoods and women and youth) in SDFs (on map/ table per SDF)** • **Proposed adaptation / resilience building activities identified on a map an in a priority list**	**0** **0** **0** **0**	**5 SDFs (3 Ghana and 2 CDI)** **5** **5** **5**	**Analyse SDFs and maps and tables in them**	**Assumptions: specific concerns and needs of women and youth should be identified in the SDFs**	**Baseline, mid-term and end of output**	**UN-H in cooperation with EE and government entities**
Output 2.1.1. Two Sub-national-level Spatial Development Framework/District level Spatial Development Frameworks: 1 targeting the Volta Delta coastal area (Ghana) and 1 targeting the Grand Pont region (Côte d'Ivoire).	No. of SDFs developed in Ghana and Côte d'Ivoire in which climate change-related coastal risks and vulnerabilities have been identified + measures to increase resilience proposed (incl. for gender/youth) Population covered by SDFs ▪ Total ▪ % Women ▪ % Youth	0 0 0 0	2 plans (1 Ghana and 1 CDI) Ghana pop covered: - T: 277,963 - W: 52% - Y: 43% CDI pop covered: - T: 3356,495 - W: 48% - Y: 31%	SDFs printed / published online Analyse / identification of climate change-related coastal risks and vulnerabilities Verify population covered by the SDFs with population data in target areas	Assumptions: there is interest from the government and the SDFs are aligned with the national/sub-national strategies. Specific concerns and needs of women and youth should be identified in the SDFs Risk: political change and lack of technical capacity.	Baseline, mid-term and end of output	UN-H in cooperation with EE and government entities

Output 2.1.2. Local-level Spatial Development Frameworks (Local development plans): two in Ghana targeting Ada East and Anloga-Keta districts, and one in Cote D'Ivoire targeting the department of Jacqueville, with climate change-related coastal risks identified and measures to increase coastal resilience proposed.	No. of SDFs developed in Ghana and Côte d'Ivoire in which climate change-related coastal risks and vulnerabilities have been identified + measures to increase resilience proposed (incl. for gender/youth)	0	3 plans (2 Ghana and 1 CDI)	SDFs printed / published online Analyse / identification of climate change-related coastal risks and vulnerabilities	Assumptions: there is interest from the government and the SDFs are aligned with the district/department strategies. Specific concerns and needs of women and youth should be identified in the SDFs Risk: political change and lack of technical capacity.	Baseline, mid-term and end of output	UN-H in cooperation with EE and government entities
Outcome 2.2. National and sub-national officers trained in urban climate adaptation techniques, motoring approaches, and climate-change-related policy development	Number of offices that received on-the-job trainings. Reports by trainers	0 0	4 (1 at Ministry and 1 District level in Ghana. 1 at Ministry and 1 District level in CDI) 1/month	Reports shared with UN-H in cooperation with EE and government	Assumptions: offices have the interest to be trained and partner organisations have the capacity. Risk: political change	Baseline, mid-term and end of output	UN-H in cooperation with EE and government
Output 2.2.1. On-the-job **trainings and workshops to strengthen capacity** of the Ministries of the Environment and Sustainable Development and of Planning and Development and municipalities, Department (CdI), and of of Land Use Spatial Planning Authority (**LUSPA**) and Municipal District Assemblies (MMDAs) (Ghana) to develop, implement, and update spatial development frameworks, to develop, use and update spatial development frameworks	No. of national and district-level government staff trained to use above model, assessment method and monitoring systems and to replicate effective and efficient building-with-nature adaptation options • National level • % Women • District level	 0 0 0	80 (40 Ghana and 40 in CDI) 40% 20 (10 in Ghana and 10 in CDI)	Meeting and training reports with count of people trained. Photos of trainings List / count of targeted institutions on training reports	Assumptions: offices have the interest to be trained and partner organisations have the capacity. Risk: political change	Baseline, mid-term and end of output	UN-H in cooperation with EE and government
Component 3: Municipal staff, communities and local stakeholders have successfully planned and implemented priority sub- projects to cope with climate-change related issues, such as sea level rise and floods, and access to climate-resilient livelihoods							
Outcome 3.1. Community level plans developed in Ghana and Côte d'Ivoire with the purpose to plan, operate, maintain, monitor and sustain/replicate concrete adaptation measures	Percentage of targeted direct population aware of predicted adverse impacts of climate change on the coast / their community participating in adaptation response activities • Total • % Women • % Youth	0 0 0	Mid:30%; End:50% W: End>50 % Y: End>15 %	Calculate % of direct target population aware of impacts and involved in project activities (plans and concrete project activities) Workshop reports with count of people + photos of workshops and activities	Risks: engagement of women and youth groups in activities	Baseline, mid-term and end	UN-H in cooperation with EE and government
Output 3.1.1. Community-level plans (11 in Ghana and 10 Côte d'Ivoire) developed with the purpose to plan, operate, maintain, monitor and sustain/replicate concrete adaptation measures deriving from the subprojects. .	No. of community plans developed in Ghana and Cote d' Ivoire to support successful implementation of concrete adaptation interventions. Pans should include sections on planning, operation, maintenance, monitoring and replication No of community-level workshops conducted to develop above plans	0 0	Ghana: 11 CDI: 10 42 (at least two per community)	Collect and calculate number of community level plans and identify required sections and roles/responsibilities Workshop reports with count of people and photos of workshops	Assumptions: plans needs to include i planning, operation, maintenance, monitoring and replication details and roles/responsibilities for proposed physical measures proposed under outcome 3.2.	Baseline, mid-term and end	UN-H in cooperation with EE and government
Outcome 3.2. Climate change adaptation subprojects are fully developed with communities and municipalities, including detailed engineering studies, and implemented in the target cities mainly through community involvement as labour-intensive manpower	**No of communities with settlement and livelihoods protected from extreme events and floods.**	**0**	**21 (11 in Ghana and 10 in Côte d'Ivoire).**	**% of activities of each subproject implemented by community.**	**Assumption: proposed adaptation measures have an impact at community and regional levels. Assumptions: communities identified as willing to engage in the implementation. Risk: Engagement of target direct population in Maintenance and monitoring of implemented projects.**	**Baseline, mid-term and end**	**UN-H in cooperation with EE and government**
Output 3.2.1 Establishment of EWS	No of communities with evacuation plan and safe areas defined No of communities with infrastructure for climate monitoring installed	0 0	19 communities (11 Ghana and 8 in CDI) 19 communities (11 Ghana and 8 in CDI)	Evacuation plan should be published and shared with the community members and at regional events Verification of construction and well-functioning facilities.	Assumption: targeted communities are opened to messages about climate-related risks and adaptation to climate change Risks: engagement of target direct population in EWS trainings and activities of awareness raising.	Baseline, mid-term and end	UN-H in cooperation with EE and government

Output 3.2.2 Integrated NBS for Urban flood adaptation	- Number of communities with integrated NBS for urban flood adaptation - Meter2 of infiltration cells - Number of direct beneficiaries - Meter of drainage channels	0 0 0 0	19 communities (11 Ghana and 8 in CDI) 3,550m2 infiltration cells 18,937 direct beneficiaries 252m of channels (2.1m width)	Verification of constructions of infiltration cells in the settlement. Comparison of flooded area before and after the construction of the facilities (Table, maps, photos, etc.)	Assumption: targeted communities are opened to messages about climate-related risks and adaptation to climate change. Assumption: targeted communities already try (informally and with lack of capacity) to mitigate flooding. Risk: during dry season community members can occupy and build in areas destinated for the system (e.g. seasonal storm water basin).	Baseline, mid-term and end	UN-H in cooperation with EE and government
Output 3.2.3 Mangrove restoration	- Number of communities with mangrove restored - Ha of mangroves planted in target area - Number of direct beneficiaries - Targeted survival/success rate of mangrove restoration - tons of carbon captured	0 0 0 0	19 communities (11 Ghana and 8 in CDI) 582 ha 85,584 direct beneficiaries 60 % 7,889 tons of $CO2$[88]	Progress over time must be shown Mangrove protection measures must be monitored as well	Assumption: there are successful experiences of mangrove restoration. Assumption: communities will engage in the protection of the restored mangrove if it provides income (carbon credit) to the communities and act as a buffer for flooding. Risk: in lack of income/livelihoods opportunities, communities tend to exploit mangrove by both harvesting and selling wood for energy generation.	Baseline, mid-term and end	UN-H in cooperation with EE and government
Output 3.2.4 Climate resilient agriculture	- Number of communities with resilient agriculture - Number of lead farmers trained - Acres of resilient agriculture piloted - Water infiltration systems installed - Increase in productivity rate compared to baseline (agricultural land without infiltration systems).	0 0 0 0	9 communities (6 Ghana and 3 in CDI) 540 180 acres/year 4 15%	List of attendance Verification of acres grown of salt resilient crops per plot and calculation for the communities Indicators for successful water infiltration systems need to be identified during project Comparison of yield of food production before and after the implementation.	Assumption: farming is already and activity in the target communities and farmers struggle to find solutions for the salinity. Assumption: lead farmers trained tend to share the knowledge with family members and at least 2 neighbours. Risk: willing of farmers to commute to the training centre in Tegbi.	Baseline, mid-term and end	UN-H in cooperation with EE and government
Outcome 3.3. Municipal staff and community members mobilised, trained and equipped for ensuring the sustainable management and/or maintenance of the implemented priority sub-projects	No. of municipal staff and community members, trained to manage implemented subprojects (maintenance and monitoring), disaggregated by: o Community o % Women	 0 0	 21 communities targeted 40%	Verification of attendance list	Assumption: communities and relevant local institutions that deal with climate resilience have been identified and are interested. Assumption: leadership and roles will be distributed among community members through a committee. Risk: lack of capacity and financial resources/support.	Baseline,mid-term and end	UN-H in cooperation with EE and government
Output 3.3.1. Trainings for Municipal staff and communities targeting sub-projects implementation and/or maintenance	No. trainings held disaggregated per subproject and by. o Community o Person trained (role in the community) o % Women	 0 0 0	 21 communities targeted 30 people/training (25 community and 5 from government) -40%	Training reports with count of people trained. Photos of trainings.	Assumption: community members will be actively engaged in the trainings. Risk: engagement of women and youth groups in activities	Baseline, mid-term and end	UN-H in cooperation with EE and government

[88] Sum of the total tons of equivalent carbon sequestered during the first 4 years which corresponds to the AF project implementation period.

PART III.F PROJECT ALIGNMENTS WITH THE AF RESULTS FRAMEWORK

Table 31. Project alignment with the Adaptation Fund results framework

Project Outcome	Project Outcome Indicator	Fund Outcome	Fund Outcome Indicator	Grant Amount (USD)
Outcome 1.1. Improved coordination among governments to adapt to climate change and to implement effective coherent measures for climate change adaptation at regional level	• **Number of trainings and reports**	**Outcome 2:** Strengthened institutional capacity to reduce risks associated with climate-induced socioeconomic and environmental losses	2.1. Capacity of staff to respond to, and mitigate impacts of, climate-related events from targeted institutions increased	532,500
		Outcome 7: Improved policies and regulations that promote and enforce resilience measures	7. Climate change priorities are integrated into national development strategy	
Outcome 1.2. Capacity-building events and knowledge sharing trans-boundary activities among the participating countries are discussed and prepared though the Abidjan Convention for: **i) sharing among the different countries experience-based adaptation mechanisms for replication.** **ii) training of national governments.** **iii) participation to global events.** **iv) support national governments in including coordinated regional level adaptation measures**	• **Number of trainings and reports**	**Outcome 4:** Increased adaptive capacity within relevant development sector services and infrastructure assets	4.1. Responsiveness of development sector services to evolving needs from changing and variable climate	
		Outcome 2: Strengthened institutional capacity to reduce risks associated with climate-induced socioeconomic and environmental losses	2.1. Capacity of staff to respond to, and mitigate impacts of, climate-related events from targeted institutions increased	
Outcome 1.3. Cross-fertilization activities for mainstreaming lessons learned and best practices captured though the implementation of community plans and sub-projects are mainstreamed among local communities in partnership with the Abidjan Convention as regional knowledge management platform	**No of events at which project lessons have been shared** **No of people attending each event and being informed with above adaptation measures disaggregated by:** ○ **Community** ○ **% women** ○ **% youth**	**Outcome 8:** Support the development and diffusion of innovative adaptation practices, tools and technologies	8. Innovative adaptation practices are rolled out, scaled up, encouraged and/or accelerated at regional, national and/or subnational level.	
		Outcome 3: Strengthened awareness and ownership of adaptation and climate risk reduction processes at local level	3.1. Percentage of targeted population aware of predicted adverse impacts of climate change, and of appropriate responses 3.2. Percentage of targeted population applying appropriate adaptation responses	
Outcome 2.1. Sub-national and district/department level spatial development framework	No. of national and district-level government staff trained, disaggregated by: 8. National level 9. District level 10. % Women No. of reports	**Outcome 7:** Improved policies and regulations that promote and enforce resilience measures	7. Climate change priorities are integrated into national development strategy	1,724,600
Outcome 2.2. National and sub-national officers trained in urban climate adaptation techniques, motoring approaches, and climate-change-related policy development	• Number of offices that received on-the-job trainings. • Reports by trainers	**Outcome 4**: Increased adaptive capacity within relevant development sector services and infrastructure assets	4.1. Responsiveness of development sector services to evolving	
		Outcome 2: Strengthened institutional capacity to reduce risks associated with climate-induced socioeconomic and environmental losses	2.1. Capacity of staff to respond to, and mitigate impacts of, climate-related events from targeted institutions increased	
		Outcome 8: Support the development and diffusion of innovative adaptation practices, tools and technologies	8. Innovative adaptation practices are rolled out, scaled up, encouraged and/or accelerated at regional, national and/or subnational level	

Outcome 3.1. Community level plans developed in Ghana and Côte d'Ivoire with the purpose to plan, operate, maintain, monitor and sustain/replicate concrete adaptation measures.	Percentage of targeted direct population aware of predicted adverse impacts of climate change on the coast / their community participating in adaptation response activities. • Total • % Women • % Youth	**Outcome 3:** Strengthened awareness and ownership of adaptation and climate risk reduction processes at local level	3.1. Percentage of targeted population aware of predicted adverse impacts of climate change, and of appropriate responses	9,437,135
		Outcome 7: Improved policies and regulations that promote and enforce resilience measures	7. Climate change priorities are integrated into national development strategy	
Outcome 3.2. Climate change adaptation subprojects are fully developed with communities and municipalities, including detailed engineering studies, and implemented in the target cities mainly through community involvement as labour-intensive manpower.	• **No of communities with settlement and livelihoods protected from extreme events and floods.**	**Outcome 5:** Increased ecosystem resilience in response to climate change and variability induced stress	5. Ecosystem services and natural resource assets maintained or improved under climate change and variability-induced stress	
		Outcome 1: Reduced exposure to climate-related hazards and threats	1. Relevant threat and hazard information generated and disseminated to stakeholders on a timely basis	
		Outcome 6: Diversified and strengthened livelihoods and sources of income for vulnerable people in targeted areas	6.1 Percentage of households and communities having more secure access to livelihood assets 6.2. Percentage of targeted population with sustained climate-resilient alternative livelihoods	
Outcome 3.3. Municipal staff and community members mobilised, trained and equipped for ensuring the sustainable management and/or maintenance of the implemented priority sub-projects	No. of municipal staff and community members, trained to manage implemented subprojects (maintenance and monitoring), disaggregated by: • Community • % Women	**Outcome 3:** Strengthened awareness and ownership of adaptation and climate risk reduction processes at local level	3.1. Percentage of targeted population aware of predicted adverse impacts of climate change, and of appropriate responses	
		Outcome 4: Increased adaptive capacity within relevant development sector services and infrastructure assets	4.1. Responsiveness of development sector services to evolving needs from changing and variable climate	
Output 1.1.1. Set up **a work plan** with the Abidjan Convention for the initiatives and events <u>to mainstream</u> (live and digitally) lessons learned and to boost capacity to adapt to climate change	Workplan with: • Description of regional and local initiatives (forums, events, etc). • Time plan ▪ Focal points and roles ▪	**Output 2.2:** Increased readiness and capacity of national and sub-national entities to directly access and program adaptation finance	2.2.1 No. of targeted institutions benefitting from the direct access and enhanced direct access modality	81,500
		Output 7 Improved integration of climate-resilience strategies into country development plans	7.2. No. of targeted development strategies with incorporated climate change priorities enforced	
Output 1.1.2. Roundtables for **regional bodies and national** governments (through the Abidjan Convention platform) to **agree on spatial strategies** for a coordinated implementation of climate change adaptation	• No of roundtable discussions • No entities attending • No of Reports of Spatial Strategies recommendations to inform the Output 1.1.1	**Output 7** Improved integration of climate-resilience strategies into country development plans	7.2. No. of targeted development strategies with incorporated climate change priorities enforced	103,000
Output 1.1.3. Regional Assessment identifying key **common challenges**, climate-**change hotspots and priority areas** (including trans-boundary issues) and recommendations for climate change adaptation at different scales	• No of Regional Assessment Reports listing and spatially mapping key challenges, regionally and identifying actions to be taken at the different scales.	**Output 2.1** Strengthened capacity of national and sub- national centers and networks to respond rapidly to extreme weather events	2.1.1. No. of staff trained to respond to, and mitigate impacts of, climate-related events (by gender) 2.1.2 No. of targeted institutions with increased capacity to minimize exposure to climate variability risks (by type, sector and scale)	98,000
Output 1.2.1. Trainings for **regional bodies and national** governments (through the Abidjan Convention platform) for increasing **capacity** of the use of data and tools to foresee and manage climate change-related risks and impacts *In line with AF output 2.1 and 8	No. of national and district-level government staff trained, disaggregated by: • National level • District level • % Women No. of reports	Output 4: Vulnerable development sector services and infrastructure assets strengthened in response to climate change impacts, including variability	4.1.1. No. and type of development sector services modified to respond to new conditions resulting from climate variability and change (by sector and scale)	92,000
		Output 2.1: Strengthened capacity of national and sub-national centers and networks to respond rapidly to extreme weather events	2.1.1. No. of staff trained to respond to, and mitigate impacts of, climate-related events (by gender)	

Output 1.3.1. Cross-fertilization **events** to mainstream at local level experiences from community plans and implementation of sub-projects all over the region	• No of meetings at which presentation with best practices is presented at international meetings. • No of Good Practices Guidelines of natural climate adaptation solutions, published and shared online (at least two websites) 1 Project video showing results developed and shared online (at least two websites).	**Output 3.2:** Strengthened capacity of national and subnational stakeholders and entities to capture and disseminate knowledge and learning	3.2.1 No. of technical committees/associations formed to ensure transfer of knowledge 3.2.2 No. of tools and guidelines developed (thematic, sectoral, institutional) and shared with relevant stakeholders	158,000
		Output 8: Viable innovations are rolled out, scaled up, encouraged and/or accelerated.	8.1. No. of innovative adaptation practices, tools and technologies accelerated, scaled-up and/or replicated 8.2. No. of key findings on effective, efficient adaptation practices, products and technologies generated	
Output 2.1.1. Two Sub-national-level Spatial Development Framework/District level Spatial Development Frameworks: 1 targeting the Volta Delta coastal area (Ghana) and 1 targeting the Grand Pont region (Côte d'Ivoire). *In line with AF output 7	No. of SDFs developed in Ghana and Côte d'Ivoire in which climate change-related coastal risks and vulnerabilities have been identified + measures to increase resilience proposed (incl. for gender/youth) Population covered by SDFs ▪ Total ▪ % Women ▪ % Youth	**Output 7:** Improved integration of climate-resilience strategies into country development plans	7.1. No. of policies introduced or adjusted to address climate change risks (by sector) 7.2. No. of targeted development strategies with incorporated climate change priorities enforced	874,600
Output 2.1.2. Local-level Spatial Development Frameworks (Local development plans): two in Ghana targeting Ada East and Anloga-Keta districts, and one in Cote D'Ivoire targeting the department of Jacqueville, with climate change-related coastal risks identified and measures to increase coastal resilience proposed.	No. of SDFs developed in Ghana and Côte d'Ivoire in which climate change-related coastal risks and vulnerabilities have been identified + measures to increase resilience proposed (incl. for gender/youth)	**Output 7:** Improved integration of climate-resilience strategies into country development plans	7.1. No. of policies introduced or adjusted to address climate change risks (by sector) 7.2. No. of targeted development strategies with incorporated climate change priorities enforced	557,000
Output 2.2.1. On-the-job **trainings and workshops to strengthen capacity** of the Ministries of the Environment and Sustainable Development and of Planning and Development and municipalities, Department (CdI), and of of Land Use Spatial Planning Authority (**LUSPA**) and Municipal District Assemblies (MMDAs) (Ghana) to develop, implement, and update spatial development frameworks, to develop, use and update spatial development frameworks.	No. of national and district-level government staff trained to use above model, assessment method and monitoring systems and to replicate effective and efficient building-with-nature adaptation options • National level • % Women • District level	**Output 2.1:** Strengthened capacity of national and sub-national centers and networks to respond rapidly to extreme weather events	2.1.1. No. of staff trained to respond to, and mitigate impacts of, climate-related events (by gender) 2.1.2 No. of targeted institutions with increased capacity to minimize exposure to climate variability risks (by type, sector and scale)	293,000
		Output 4: Vulnerable development sector services and infrastructure assets strengthened in response to climate change impacts, including variability	4.1.1. No. and type of development sector services modified to respond to new conditions resulting from climate variability and change (by sector and scale)	
		Output 8: Viable innovations are rolled out, scaled up, encouraged and/or accelerated.	8.1. No. of innovative adaptation practices, tools and technologies accelerated, scaled-up and/or replicated 8.2. No. of key findings on effective, efficient adaptation practices, products and technologies generated	
Output 3.1.1. Community-level plans (11 in Ghana and 10 Côte d'Ivoire) developed with the purpose to plan, operate, maintain, monitor and sustain/replicate concrete adaptation	No. of community plans developed in Ghana and Cote d' Ivoire to support successful implementation of concrete adaptation interventions. Pans should include sections on planning,	**Output 3.2:** Strengthened capacity of national and subnational stakeholders and entities to capture and disseminate knowledge and learning	3.2.2 No. of tools and guidelines developed (thematic, sectoral, institutional) and shared with relevant stakeholders	1,859,360
		Output 7: Improved integration of climate-resilience strategies into country development plans	7.2. No. of targeted development strategies with incorporated climate change priorities enforced	

measures deriving from the subprojects.	operation, maintenance, monitoring and replication - No of community-level workshops conducted to develop above plans			
Output 3.2.1 Establishment of EWS	- No of communities with evacuation plan and safe areas defined - No of communities with infrastructure for climate monitoring installed	**Output 1.2:** Targeted population groups covered by adequate risk reduction systems **Output 5:** Vulnerable ecosystem services and natural resource assets strengthened in response to climate change impacts, including variability **Output 6:** Targeted individual and community livelihood strategies strengthened in relation to climate change impacts, including variability	1.2.1. Percentage of target population covered by adequate risk-reduction systems 5.1. No. of natural resource assets created, maintained or improved to withstand conditions resulting from climate variability and change (by type and scale) 6.1.1.No. and type of adaptation assets (tangible and intangible) created or strengthened in support of individual or community livelihood strategies	1,533,600
Output 3.2.2 Integrated NBS for Urban flood adaptation	- Number of communities with integrated NBS for urban flood adaptation - Meter2 of infiltration cells - Meter of drainage channels			1,464,522
Output 3.2.3 3.2.3. Mangrove restoration	- Number of communities with mangrove restored - Ha of mangroves planted in target area - Number of direct beneficiaries			1,785,339
Output 3.2.4 Climate resilient agriculture	- Number of communities with resilient agriculture - Number of lead farmers trained - Acres of resilient agriculture piloted - Water infiltration systems installed - Increase in productivity rate compared to baseline (agricultural land without infiltration systems).			2,588,414
Output 3.3.1. Trainings for Municipal staff and communities targeting sub-projects implementation and/or maintenance	No. trainings held disaggregated per subproject and by. ○ Community ○ Person trained (role in the community) ○ % Women	**Output 3.2:** Strengthened capacity of national and subnational stakeholders and entities to capture and disseminate knowledge and learning	3.2.1 No. of technical committees/associations formed to ensure transfer of knowledge	206,000
		Output 4: Vulnerable development sector services and infrastructure assets strengthened in response to climate change impacts, including variability	4.1.1. No. and type of development sector services modified to respond to new conditions resulting from climate variability and change (by sector and scale) 4.1.2. No. of physical assets strengthened or constructed to withstand conditions resulting from climate variability and change (by sector and scale)	

PART III.G DETAILED BUDGET

Table 32. Detailed

Project Components	Expected Concrete Outputs	Expected Concrete Outcomes	TOTAL	Year 1 12 m	Year 2 12 m	Year 3 12 m	Year 4 12 m
Component 1	1.1.1.Set up a work plan with the Abidjan Convention for the initiatives and events to mainstream (live and digitally) lessons learned and to boost capacity to adapt to climate change	1.1.Improved coordination among governments to adapt to climate change and to implement effective coherent measures for climate change adaptation at regional level	81.500	46.500	10.000	10.000	15.000
	1.1.2.Round-tables for regional bodies and national governments (through the Abidjan Convention platform) to agree on spatial strategies for a coordinated implementation of climate change adaptation		103.000	30.000	27.000	26.000	20.000
	1.1.3. Regional Assessment identifying key common challenges, climate-change hotspots and priority areas (including trans-boundary issues) and recommendations for climate change adaptation at different scales		98.000	88.000	0	5.000	5.000
	1.2.1. Trainings for regional bodies and national governments (through the Abidjan Convention platform) for increasing capacity of the use of data and tools to foresee and manage climate change-related risks and	1.2. Capacity-building events and knowledge sharing trans-boundary activities among the participating countries are discussed and prepared though the Abidjan Convention for: i)sharing among the different countries experience-based adaptation mechanisms for replication; ii) training of national governments; iii) participation to global events; iv) support national governments in including coordinated regional level adaptation measures	92.000	6.000	40.000	46.000	0
	1.3.1.Cross-fertilization events to mainstream at local level experiences from community plans and implementation of sub-projects all over the region	1.3. Cross-fertilization activities for mainstreaming lessons learned and best practices captured though the implementa-tion of community plans and sub-projects are mainstreamed among local communities in partnership with the Abidjan Convention as regional knowledge management platform	158.000	32.000	5.000	47.500	73.500
	TOTAL		**532.500**	**202.500**	**82.000**	**134.500**	**113.500**
Component 2	**Output 2.1.1.** Two Sub-nationaHevel Spatial Development Frame-work/District level Spatial Development Frameworks: 1 targeting the Volta Delta coastal area (Ghana) and one targeting the Grand Pont region (Cote d'Ivoire).	2.1.Subnational and district/department level spatial development framework	874.600	624.750	230.350	13.000	6.500
	Output 2.1.2. Local-level Spatial Development Frameworks (Local development plans): two in Ghana targeting Ada East and Keta dis-tricts, and one in Cote D'Ivoire targeting the department of Jaqueville, with climate change-related coastal risks identified and measures to increase coastal resilience proposed		557.000	129.050	414.950	6.500	6.500
	Output 2.2.1. On-the-job trainings and workshops to strengthen capacity of the Ministries of the Environment and Sustainable Development and of Planning and Development and municipalities, Department (Cdl), and of of Land Use Spatial Planning Authority (LUSPA) and Municipal District Assemblies (MMDAs) (Ghana) to develop, implement, and update spatial development frameworks, to develop, use and update spatial development frameworks	2.2.National and sub-national officers trained in urban climate adaptation techniques, motor-ing approaches, and climate-change-related policy development	293.000	139.000	154.000	0	0
	TOTAL		**1.724.600**	**892.800**	**799.300**	**19.500**	**13.000**
Component 3	**Output 3.1.1.** Community-level plans (11 in Ghana and 10 Cote d'Ivoire) developed with the purpose to plan, operate, maintain, monitor and sustain/replicate concrete adaptation measures deriving from the subprojects.	3.1.Community level plans developed in Ghana and Côte d'Ivoire with the purpose to plan, operate, maintain, monitor and sustain/replicate concrete adaptation measures	1.859.360	546.860	576.000	597.000	139.500
	Output 3.2.1. Establishment of EWS	3.2.Climate change adaptation subprojects are fully developed with communities and municipalities, including detailed engineering studies, and implemented in the target cities mainly through community involvement as labour-intensive manpower	1.533.500	860.500	379.500	218.000	75.500
	Output 3.2.2. Integrated NBS for urban flood adaptation		1.464.522	226.000	1.051.600	113.000	73.922
	Output 3.2.3. Mangrove restoration		1.785.339	316.298	1.263.337	122.336	83.368
	Output 3.2.4. Climate resilient agriculture		2.588.414	131.100	500.638	1.766.688	189.988
	Output 3.3.1. Trainings for Municipal staff and communities targeting sub-projects implementation and/or maintenance	3.3.Municipal staff and community members mobilised, trained and equipped for ensuring the sustainable management and/or maintenance of the implemented priority sub-projects	206.000	26.750	81.750	48.750	48.750
	TOTAL		9.437.135	2.107.508	3.852.825	2.865.774	611.028
Sub-total Project Components Costs			**11.694.235**	3.202.808	4.734.125	3.019.774	737.528
Sub-projects total	Subtotal Outputs 3.2.1 to 3.2.4		**7.371.775**	1.533.898	**3.195.075**	2.220.024	**422.778**
Project Execution Costs	Regional project coordination (international)		480.000	120.000	144.000	144.000	72.000
	National Project execution		494.000	155.000	186.000	123.000	30.000
	Travel Related to Execution		32.000	12.000	8.000	8.000	4.000
	Operations		149.000	45.000	39.000	39.000	26.000
	Terminal evaluation	9,50	42.000	0	0	0	42.000
Sub-total Project Execution Costs (max 9.5 %)		**9,29**	**1.197.000**	332.000	377.000	314.000	174.000
SUB-TOTAL Component + execution fee			**12.891.235**	3.534.808	5.111.125	3.333.774	911.528
Project Cycle Management Fee	UN-H ROAf Project Support Costs: AF and UN-H policies compliance Progress / evaluation Travel	0	193.369	53.022	76.667	50.007	13.673
	UN-H HQ Project Support Costs: Overall project supervision, incl. compliance to UN-H policies and standards (gender, human rights, climate change, etc.)	0	902.386	247.437	357.779	233.364	63.807
Sub-total Project Cycle Managament Fee (max 8.5 %)		0	**1.095.755**	300.459	434.446	283.371	77.480
Amount of Financing Requested			**13.986.990**	3.835.267	5.545.570	3.617.145	989.008

Detailed Budget note:
1- UN-Habitat, after receiving a request from the Governments of Ghana and Cote d´Ivoire and after non-objection from the AF Secretariat, proposes to execute Output 3.3.1. In order to comply with OPG Annex 7 and AF Board decision B.18/30, UN-Habitat has discounted the executed amount of USD 206,000 from the total budget, to ensure that the Project Execution Costs minus de executed amount are below the 9.5% threshold.

2- In order to avoid double charging of Project Cycle Management Fees by UN Agencies acting as Execution Entity, United Nations established the UN to UN Agency Agreement, to transfer the 6% of PCMF corresponding to the ABC total executed amount of USD 434,500 from UN-Habitat to UNEP Abidjan Convention from the PCMF assigned to UN-Habitat.

PART III.H DISBURSEMENT SCHEDULE

Table 33. Disbursement Schedule

Schedule date	Upon Signing	One Year after project inception	Two years after project inception	Grand Total
A. Project Funds (US$)	**3.202.808**	**7.753.899**	**737.528**	**11.694.235**
B. Project Execution (US$)	**332.000**	**691.000**	**174.000**	**1.197.000**
C. Project Cycle Mgt (US$)	**300.459**	**717.816**	**77.480**	**1.095.755**
Grand Total	3.835.267	9.162.715	989.008	13.986.990

PART IV: ENDORSEMENT BY GOVERNMENT AND CERTIFICATION BY THE IMPLEMENTING ENTI

Annex 5 to OPG Amended in October 2017

A. Record of endorsement on behalf of the governments

Peter Dery, Director, Environment Ministry of Environment, Science, Technology & Innovation Designated Authority for the Adaptation Fund, Republic of Ghana	Date: December 24th, 2021
Mr. Marcel Ignace Fodjo, Economist, Engineer Environmental Technical Assistant in Charge of Climate Resources Mobilization Ministry of Environment and Sustainable Development, Republic of Côte d'Ivore	December 17th, 2021

B. Implementing Entity certification

I certify that this proposal has been prepared in accordance with guidelines provided by the Adaptation Fund Board, and prevailing National Development and Adaptation Plans, especially the NDCs of Ghana and Cote d'Ivoire and their national climate change strategies / policies, and subject to the approval by the Adaptation Fund Board, commit to implementing the project/programme in compliance with the Environmental and Social Policy of the Adaptation Fund and on the understanding that the Implementing Entity will be fully (legally and financially) responsible for the implementation of this project/programme.

Mr. Rafael Tuts, Director, Global Solutions Division, UN-Habitat

Signature:

Implementing Entity Coordinator

Date: January 6th, 2022	Tel. +254 20 76 23 726; Email: raf.tuts@un.org
Project Contact Person: Project Contact Person: Javier Torner; Mathias Spaliviero	
Email: Javier.torner@un.org; mathias.spaliviero@un.org	

REPUBLIC OF GHANA

MINISTRY
OF
ENVIRONMENT, SCIENCE,
TECHNOLOGY AND
INNOVATION

P. O. Box M232, Ministries - Accra
Digital Address : GA-107-3073

Kindly quote this number and date on all correspondence
My Ref. No. MESTI/IA/006/02/Vol.2
Your Ref. No.

Date. 24th December, 2021

THE ADAPTATION FUND BOARD
C/O ADAPTATION FUND BOARD SECRETARIAT
Email: Secretariat@Adaptation-Fund.org
Fax: 202 522 3240/5

SUBJECT: ENDORSEMENT FOR PROJECT "IMPROVED RESILIENCE OF COASTAL COMMUNITIES IN GHANA AND COTE D'IVOIRE"

In my capacity as designated authority for the Adaptation Fund in the Republic of Ghana, I confirm that the above national project proposal is in accordance with the government's national priorities in implementing adaptation activities to reduce adverse impacts of and risks, posed by climate change in Ghana.

Accordingly, I am pleased to endorse the above project proposal with support from the Adaptation Fund. If approved, the project will be implemented by the United Nations Human Settlements Program (UN-Habitat) in collaboration with the Ministry of Environment, Science, Technology & Innovation (MESTI) and an executing entity of Ghana at the national level.

UN-Habitat will execute Output 2.2.1 to support the capacity building of the Ministry of Environment, Science, Technology & Innovation and the Land Use and Spatial Planning Authority.

We count on your usual cooperation.

PETER DERY
ADAPTATION FUND NATIONAL
DESIGNATED AUTHORITY
DIRECTOR, ENVIRONMENT

Tel: +233 (0) 302 662 626
Email: info@mesti.gov.gh
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LAND USE AND SPATIAL PLANNING AUTHORITY (LUSPA)
HEAD OFFICE
POST OFFICE BOX M 61
MINISTRIES - ACCRA

Reference No. P|LNT|Vol.II

LETTER OF ENDORSEMENT BY LAND USE AND SPATIAL PLANNING AUTHORITY

11th December, 2020

ADAPTATION FUND

To: Adaptation Fund Board
c/o Adaptation Fund Board Secretariat
Email: Secretariat@Adaptation-Fund.org
Fax: 202 522 3240/5

Through: Adaptation Fund National Designated Authority
Director, Environment.
Ministry of Environment, Science, Technology & Innovation
Email: info@mesti.gov.gh
Fax: 0302-688 913/688663

Subject: LUSPA requesting UN-Habitat to execute output 1.3. under component 1 of the proposed AF project 'Improved Resilience of Coastal Communities in Cote d' Ivoire and Ghana.'

In my capacity as LUSPA representative, I request approval from the AF to have UN-Habitat execute output 1.3. under component 1 of the proposed AF Project 'Improved Resilience of Coastal Communities in Cote d' Ivoire and Ghana.'

The rationale for the request is that UN-Habitat is mandated and best placed among potential execution entities to conduct the proposed project activities under output 1.3, including having a unique technical advantage and being more cost-effective than competitors. Activities under output 1.3 would include guiding and strenghetning the capacity of LUSPA and MMDAs to develop spatial development frameworks in which climate change risks are mainstreamed (see outputs 1.1 and 1.2 under component 1).

LUSPA will also coordinate the development of the district-level spatial development frameworks with the project target MMDAs and disburse budgets for this purpose to the target MMDAs.

Moreover, LUSPA will achieve sustainability of proposed project activities under outputs 1.1 and 1.2 under component 1 by ensuring that the Sub-Regional and District Frameworks are periodically updated as required by national law.

(NAME OF DEPARTMENT)
Office Address:
Land Use and Spatial Planning Authority,
Head Office,
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MINISTRY OF ENVIRONMENT AND SUSTAINABLE DEVELOPMENT

GENERAL COORDINATION OF PROGRAMS AND PROJECTS

NATIONAL CLIMATE CHANGE PROGRAM

N°0002 /MINEDD/CAB/CGPP/PNCC/fmi

REPUBLIC OF CÔTE D'IVOIRE
Union - Discipline – Work

Abidjan, le 17 DEC. 2021

ADAPTATION FUND

Letter of Endorsement by Government

To: **The Adaptation Fund Board**
c/o Adaptation Fund Board Secretariat
Email: Secretariat@Adaptation-Fund.org
Fax: 202 522 3240/5

Subject: Endorsement for Project "Improved Resilience of Coastal Communities in Côte d'Ivoire and Ghana"

In my capacity as designated authority for the Adaptation Fund in Republic of Côte d'Ivoire, I confirm that the above national project proposal is in accordance with the government's national priorities in implementing adaptation activities to reduce adverse impacts of, and risks, posed by climate change in Côte d'Ivoire.

Accordingly, I am pleased to endorse the above project proposal with support from the Adaptation Fund. If approved, the project will be implemented by the United Nations Human Settlements Program (UN-Habitat) in collaboration with the Ministry of Environment and Sustainable Development, the Ministry of Planning and Development, Ministry of Interior and Security and an executing entity of Côte d'Ivoire at the national level.

UN-Habitat will execute Output 2.2.1 to support the capacity building of the Ministry of Environment and Sustainable Development and the Ministry of Planning and Development.

Ministère de l'Environnement et du Développement Durable – Autorité Nationale Désignée du Fonds d'Adaptation – Le Point Focal

FODJO Marcel Ignace
Adaptation Fund National Designated Authority
Technical Assistant Technical assistant in charge of resource mobilization

MINISTERE DE L'ENVIRONNEMENT ET DU DEVELOPPEMENT DURABLE
Cité Administrative, Tour D, 10ème étage
20 BP 650 Abidjan 20 – Tel: (225) 27 20 23 99 01/14

MINISTRY OF PLAN AND DEVELOPMENT

DIRECTORATE GENERAL OF PLANNING OF THE TERRITORY, REGIONAL AND LOCAL DEVELOPMENT

THE DIRECTOR GENERAL

N° / Ref 0002 / MPD / DGATDRL / tc

REPUBLIC OF COTE D'IVOIRE
Union - Discipline - Labor

Abidjan, January 04, 2021

Letter of Endorsement by the Ministry of Plan and Development addressed to the Adaptation Fund Board, c / Adaptation Fund Board Secretariat
Email : Secretariat@Adaptation-Fund.org, Fax: 202 522 3240/5

****

Subject : The Ministry of Plan and Development of the Republic of Cote d'Ivoire requests UN-Habitat to implement output 1.6. as part of component 1 of the AF project entitled " ***Improving the resilience of coastal communities in Cote d'Ivoire and Ghana*** ".

In my capacity as representative of the Ministry of Plan, I request the approval of the AF for UN-Habitat to implement product 1.6 as part of component 1 of the AF project entitled " ***Improving the resilience of coastal communities in Côte d'Ivoire and Ghana*** ".

The rationale for the request is that UN-Habitat is mandated and best positioned among potential implementing entities to carry out the project activities proposed under Output 1.6, including having a unique technical advantage and being more cost effective than its competitors. Activities under Output 1.6 would include guiding and strengthening the capacity of the Ministry of Plan and Development, as well as subnational authorities to develop spatial development frameworks in which climate change risks are integrated (see results 1.4 and 1.5 of component 1).

In addition, the Ministry of Plan and Development undertakes to ensure the sustainability of the project activities proposed under outputs 1.4 and 1.5 under component 1 by mobilizing staff and budgets during and after the project, necessary to update the spatial frameworks as required by national legislation. The Ministry of Plan will also coordinate the preparation of territorial development frameworks at the subnational level with the local authorities targeted by the project and will provide them with the necessary means.

Cordially,

Le Directeur Général

ALLOU Saraka Koffi André
Director General of Planning of the Territory, Regional and Local Development

PART V: BUDGET NOTES AND M&E

Outputs	Phases	Activities	Notes / Staff	TOTAL	Year	Year	Year	Year
1.1.1.Set up a work plan with the Abidjan Convention for the initiatives and events to mainstream (live and digitally) lessons learned and to boost capacity to adapt to climate change.		i) Preliminary meeting with the Abidjan Convention to agree on a work plan	Rate of USD for the cost of a meeting	5000	5000	0	0	0
		II) Activity plan (of events) and responsibilities mapping;	Rate of USD for one person working one month at preapring the draft of the agenda for the action plan	5000	5000	0	0	0
		iii) Validation meeting with the Abidjan Convention	Rate of USD for the cost of a meeting	2500	2500	0	0	0
		iv) set up of a website (or page within the Abidjan convention website)	One online page/linked website	10000	10000	0	0	0
		v) communication all over the years of the project.	Continous update of online page/linked website (1 person working 1 week per month all over the project (4 years), which means 12 months of work)	50000	15000	10000	10000	15000
		Travel and DSAs	Cost of a 5 days mission to Cdl (200 USD per day DSA + 2000 USD flight a/r)	9000	9000	0	0	0
Subtotal				81500	46500	10000	10000	15000
1.1.2.Round-tables for regional bodies and national governments (through the Abidjan Convention platform) to agree on spatial strategies for a coordinated implementation of climate change adaptation programs/projects (e.g. WACA)		I) Assessing alignments between the project's outputs and other regional projects and spatial strategies	Rate of USD is for one person working one month doing desk research	10000	10000	0	0	0
		ii) semestral meetings (8) at regional level;	8 regional meetings (40% of this budget is dedicated only to women)	20000	5000	5000	5000	5000
			Staff work to organize and lead the meetings (one person, working two months in total. If meetings are 8, it means one week of work for each meeting)	10000	2500	2500	2500	2500
			Staff work to prepare all the material needed for the meetings (one month all over the project. If meetings are 8, it means 2.5 days of material preparation before each meeting)	10000	2500	2500	2500	2500
		iii) semestral meetings (8) for national governments to mainstream information derived from the regional meetings (prioritizing the involvement of countries hosting trans-boundary initiatives)	8 national governments meetings (40% of this budget is dedicated only to women)	20000	5000	5000	5000	5000
			Staff work to organize and lead the meetings (one person, working two months in total. If meetings are 8, it means one week of work for each meeting)	10000	2500	2500	2500	2500
			Staff work to prepare all the material needed for the meetings (one month all over the project. If meetings are 8, it means 2.5 days of material preparation before each meeting)	10000	2500	2500	2500	2500
		Travel and DSAs	Cost of a 5 days mission to Ghana (300 USD per day DSA + 2000 USD flight a/r)	7000	0	7000	0	0
			Cost of a 5 days mission to Cdl (200 USD per day DSA + 2000 USD flight a/r)	6000	0	0	6000	0
Subtotal				103000	30000	27000	26000	20000
1.1.3. Regional Assessment identifying key common challenges, climate-change hotspots and priority areas (including trans-boundary issues) and recommendations for climate change adaptation at different scales		I) desk research from existing literature (scientific and grey literate) about common challenges;	Rate of USD is for one person working two months doing desk research on existing literature	15000	15000	0	0	0
		ii) Meetings with relevant institution for discussing and validating the findings	Rate of USD for one hour of work of one person, in a meeting	6000	6000	0	0	0
		iii) Data gathering and GIS analysis of key hotspots based on past events, impacts and vulnerability;	Rate of USD is for one person working two months doing GIS analysis for risk assessment	15000	15000	0	0	0
		iv) Meetings with relevant institutions for discussing and validating results from the GIS analysis		6000	6000	0	0	0
		v) identification of cross-boundary hotspots and document preparation	Rate of USD is for one person working eight months preparing the draft of the document, liasing with Abidjan convention for validation and finalizing the document	40000	40000	0	0	0
		vi) Meetings with relevant institutions for discussing the document preparation	Rate of USD for one hour of work of one person, in a meeting	6000	6000	0	0	0
		vii) validation of results through the Abidjan convention platform	one online event to present the final results (UN-Habitat staff)	0	0	0	0	0
		viii) drafting recommendations;	Rate USD is for one person working one month at the layout of the document	5000	0	0	5000	0
		ix) printed and online	The rate USD is the cost for printing one copy of the document. 50 copies	5000	0	0	0	5000
Subtotal				98000	88000	0	5000	5000
1.2.1. Trainings for regional bodies and national governments (through the Abidjan Convention platform) for increasing capacity of the use of data and tools to foresee and manage climate change-related risks and impacts		I) material preparation for enhancing climate adaptation knowledge;	The Rate USD is the cost of one training. (30 people per training. Targeting 2-4 institutions per country). Training will be 8 in total (see column L)	40000	0	20000	20000	0
		ii) workshops and trainings at national level (8);	The rate Usd is the cost of a trainer working 4 months in total to implement the trainings (40% of this budget is dedicated to women only)	10000	0	5000	5000	0
		iii) workshops and trainings at district level (8);	The Rate USD is the cost of one training. Training events: 30 people per training. Targeting 2 districts per country, with 4 trainings per country for a total of 8 training. (40% of this budget is dedicated to women only)	20000	0	10000	10000	0
		iv) to mainstream the model and monitoring system into government processes of planning and monitoring	The Rate Usd is the cost of a trainer working 4 months in total to implement the trainings	10000	0	5000	5000	0
		Travel and DSAs	Cost of a 5 days mission to Cdl (200 USD per day DSA + 2000 USD flight a/r)	12000	6000	0	6000	0
Subtotal				92000	6000	40000	46000	0
1.3.1.Cross-fertilization events to mainstream at local level experiences from community plans and implementation of sub-projects all over the region		Regional SC meetings (to guide implementation and share lessons)	The rate USD is the cost of one meeting. Meeting in total will be 5, involving 20 people per meeting (40% of this budget is dedicated only to women, and 15% to youth)	12500	0	0	12500	0
		National SC meetings (to guide implementation and share lessons)	The rate USD is the cost of one meeting. Meeting in total will be 8: 4 in Ghana and 4 in Cdl. 20 people per meeting (40% of this budget is dedicated to women only, and 15% to youth)	20000	5000	5000	5000	5000
		Best practices and guidelines published and shared online	Development and publishing of guidelines	60000	0	0	0	60000
		Project video	Baseline, process and results	30000	0	0	30000	0
		Presenting results with presentation	Person presenting	2500	0	0	0	2500
		Adaptation Fund West Africa project meeting at WUF 11	The rate USD is the cost of one meeting. Meeting in total will be 4: 2 representatives from Ghana and 2 from Cdl.	20000	20000	0	0	0
		Travel and DSAs	Cost of a 5 days mission to Ghana (300 USD per day DSA + 2000 USD flight a/r)	7000	7000	0	0	0
			Cost of a 5 days mission to Cdl (200 USD per day DSA + 2000 USD flight a/r)	6000	0	0	0	6000
Subtotal				158000	32000	5000	47500	73500
TOTAL Component 1				532500	2025000	82000	134500	113500
2.2.1.Two Sub-national-level Spatial Development Framework/District level Spatial Development Frameworks: 1 targeting the Volta Delta coastal area (Ghana) and one targeting the Grand Pont region (Cote d'Ivoire).	Phase 1: Prepare	Stakeholders engagement and participatory strategy	The USD rate is the cost of the activity in one Country (Ghana)	5000	5000	0	0	0
			The USD rate is the cost of the activity in one Country (Cdl)	5000	5000	0	0	0
		Launching session	The USD rate is the cost of the activity in one Country (Ghana)	5000	5000	0	0	0
			The USD rate is the cost of the activity in one Country (Cdl)	5000	5000	0	0	0
		Communication strategy	The USD rate is the cost of the activity in one Country (Ghana)	5000	5000	0	0	0
			The USD rate is the cost of the activity in one Country (Cdl)	5000	5000	0	0	0
		Establish committees and working groups	The USD rate is the cost of the activity in one Country (Ghana)	2500	2500	0	0	0
			The USD rate is the cost of the activity in one Country (Cdl)	2500	2500	0	0	0
		Workplan for these groups	The USD rate is the cost of the activity in one Country (Ghana)	2500	2500	0	0	0
			The USD rate is the cost of the activity in one Country (Cdl)	2500	2500	0	0	0
		Regular meetings	The USD rate is the cost of the activity in one Country (Ghana)	20000	15000	5000	0	0
			The USD rate is the cost of the activity in one Country (Cdl)	20000	15000	5000	0	0
		Literature review	The USD rate is the cost of the activity in one Country (Ghana)	3000	3000	0	0	0
			The USD rate is the cost of the activity in one Country (Cdl)	3000	3000	0	0	0
		Strategic summary	The USD rate is the cost of the activity in one Country (Ghana)	3000	3000	0	0	0
			The USD rate is the cost of the activity in one Country (Cdl)	3000	3000	0	0	0
		Scope, boundaries, overall workplan	The USD rate is the cost of the activity in one Country (Ghana)	4000	4000	0	0	0
			The USD rate is the cost of the activity in one Country (Cdl)	4000	4000	0	0	0
		Inception workhop	The USD rate is the cost of the activity in one Country (Ghana)	2500	2500	0	0	0
			The USD rate is the cost of the activity in one Country (Cdl)	2500	2500	0	0	0
		Inception report	The USD rate is the cost of the activity in one Country (Ghana)	12000	12000	0	0	0
			The USD rate is the cost of the activity in one Country (Cdl)	12000	12000	0	0	0
	Phase 2: Implement (analysis and diagnonsis + plan proposal and implementation plan	Literature review	The USD rate is the cost of the activity in one Country (Ghana)	9000	9000	0	0	0
			The USD rate is the cost of the activity in one Country (Cdl)	9000	9000	0	0	0
		Field work for data collection	The USD rate is the cost of the activity in one Country (Ghana)	16000	16000	0	0	0
			The USD rate is the cost of the activity in one Country (Cdl)	16000	16000	0	0	0
		Draft report on analysis and dignosis	The USD rate is the cost of the activity in one Country (Ghana)	24000	24000	0	0	0
			The USD rate is the cost of the activity in one Country (Cdl)	24000	24000	0	0	0
		Validation workshop	The USD rate is the cost of the activity in one Country (Ghana)	3000	3000	0	0	0
			The USD rate is the cost of the activity in one Country (Cdl)	3000	3000	0	0	0
		Final report	The USD rate is the cost of the activity in one Country (Ghana)	6000	6000	0	0	0
			The USD rate is the cost of the activity in one Country (Cdl)	6000	6000	0	0	0
		Consultative workshop	The USD rate is the cost of the activity in one Country (Ghana)	3000	3000	0	0	0
			The USD rate is the cost of the activity in one Country (Cdl)	3000	3000	0	0	0
		Definition of vision and goals	The USD rate is the cost of the activity in one Country (Ghana)	6000	6000	0	0	0
			The USD rate is the cost of the activity in one Country (Cdl)	6000	6000	0	0	0
		Spatial Development Scenarios	The USD rate is the cost of the activity in one Country (Ghana)	9000	9000	0	0	0
			The USD rate is the cost of the activity in one Country (Cdl)	9000	9000	0	0	0
		Validation workshop	The USD rate is the cost of the activity in one Country (Ghana)	3000	3000	0	0	0
			The USD rate is the cost of the activity in one Country (Cdl)	3000	3000	0	0	0

		Final report	The USD rate is the cost of the activity in one Country (Ghana)	9000	9000	0	0	0
			The USD rate is the cost of the activity in one Country (Cdi)	9000	9000	0	0	0
		Strategic environmental assessment in Ghana	The USD rate is the cost of the activity in one Country (Ghana)	79000	79000	0	0	0
		Strategic environmental assessment in Cdi	The USD rate is the cost of the activity in one Country (Cdi)	89000	89000	0	0	0
		Consultative workshop	The USD rate is the cost of the activity in one Country (Ghana)	10000	10000	0	0	0
			The USD rate is the cost of the activity in one Country (Cdi)	10000	10000	0	0	0
		Development strategies	The USD rate is the cost of the activity in one Country (Ghana)	50000	50000	0	0	0
			The USD rate is the cost of the activity in one Country (Cdi)	50000	50000	0	0	0
		Validation workshop	The USD rate is the cost of the activity in one Country (Ghana)	10000	0	10000	0	0
			The USD rate is the cost of the activity in one Country (Cdi)	10000	0	10000	0	0
		Key strategic projects	The USD rate is the cost of the activity in one Country (Ghana)	25000	0	25000	0	0
			The USD rate is the cost of the activity in one Country (Cdi)	25000	0	25000	0	0
		Action plan	The USD rate is the cost of the activity in one Country (Ghana)	27200	0	27200	0	0
			The USD rate is the cost of the activity in one Country (Cdi)	27200	0	27200	0	0
		validation workshop	The USD rate is the cost of the activity in one Country (Ghana)	5000	0	5000	0	0
			The USD rate is the cost of the activity in one Country (Cdi)	5000	0	5000	0	0
		Stakeholder consultation for the adoption of the plan	The USD rate is the cost of the activity in one Country (Ghana)	3000	0	3000	0	0
	Phase 3: Operate Phase 4: Maintain		The USD rate is the cost of the activity in one Country (Cdi)	3000	0	3000	0	0
		Dissemination of plan	The USD rate is the cost of the activity in one Country (Ghana)	16600	0	16600	0	0
			The USD rate is the cost of the activity in one Country (Cdi)	16600	0	16600	0	0
		Operation, management, monitoring and evaluation	The USD rate is the cost of the activity in one Country (Ghana)	11500	5750	5750	0	0
			The USD rate is the cost of the activity in one Country (Cdi)	57500	23000	34500	0	0
	Travel and DSA	Travel in Ghana	Cost of a 5 days mission to Ghana (300 USD per day DSA + 2000 USD flight a/r)	21000	7000	3500	7000	3500
		Travel Cdi	Cost of a 5 days mission to Cdi (200 USD per day DSA + 2000 USD flight a/r)	18000	6000	3000	6000	3000
Sub-total				**874600**	**624750**	**230350**	**13000**	**6500**
2.2.2 Local-level Spatial Development Frameworks (Local development plans): two in Ghana targeting Ada East and Keta districts, and one in Cote D'Ivoire targeting the department of Jaqueville, with climate change-related coastal risks identified and measures to increase coastal resilience proposed	Phase 1: Prepare	Stakeholders engagement and participatory strategy	The USD rate is the cost of the activity in one district in Ghana	4800	4800	0	0	0
			The USD rate is the cost of the activity in one department in Cdi	2400	2400	0	0	0
		Launching session	The USD rate is the cost of the activity in one district in Ghana	4800	4800	0	0	0
			The USD rate is the cost of the activity in one department in Cdi	2400	2400	0	0	0
		Communication strategy	The USD rate is the cost of the activity in one district in Ghana	4800	4800	0	0	0
			The USD rate is the cost of the activity in one department in Cdi	2400	2400	0	0	0
		Establish committees and working groups	The USD rate is the cost of the activity in one district in Ghana	2400	2400	0	0	0
			The USD rate is the cost of the activity in one department in Cdi	1200	1200	0	0	0
		Workplan for these groups	The USD rate is the cost of the activity in one district in Ghana	4800	4800	0	0	0
			The USD rate is the cost of the activity in one department in Cdi	2400	2400	0	0	0
		Regular meetings	The USD rate is the cost of the activity in one district in Ghana	19200	4800	14400	0	0
			The USD rate is the cost of the activity in one department in Cdi	9600	2400	7200	0	0
		Literature review	The USD rate is the cost of the activity in one district in Ghana	3000	3000	0	0	0
			The USD rate is the cost of the activity in one department in Cdi	1500	1500	0	0	0
		Strategic summary	The USD rate is the cost of the activity in one district in Ghana	3000	3000	0	0	0
			The USD rate is the cost of the activity in one department in Cdi	1500	1500	0	0	0
		Scope, boundaries, overall workplan	The USD rate is the cost of the activity in one district in Ghana	3800	3800	0	0	0
			The USD rate is the cost of the activity in one department in Cdi	1900	1900	0	0	0
		Inception workhop	The USD rate is the cost of the activity in one district in Ghana	2400	2400	0	0	0
			The USD rate is the cost of the activity in one department in Cdi	1200	1200	0	0	0
		Inception report	The USD rate is the cost of the activity in one district in Ghana	11600	11600	0	0	0
			The USD rate is the cost of the activity in one department in Cdi	5800	5800	0	0	0
		LUSPA coordination of MMDAs	The USD rate is the cost of the activity in one district in Ghana	30000	15000	15000	0	0
			The USD rate is the cost of the activity in one department in Cdi	15000	7500	7500	0	0
	Phase 2: Implement (analysis and diagnonsis + plan proposal and implementation plan	Literature review	The USD rate is the cost of the activity in one district in Ghana	9000	0	9000	0	0
			The USD rate is the cost of the activity in one department in Cdi	4500	0	4500	0	0
		Field work for data collection	The USD rate is the cost of the activity in one district in Ghana	15000	0	15000	0	0
			The USD rate is the cost of the activity in one department in Cdi	7500	0	7500	0	0
		Draft report on analysis and dignosis	The USD rate is the cost of the activity in one district in Ghana	23200	0	23200	0	0
			The USD rate is the cost of the activity in one department in Cdi	11600	0	11600	0	0
		Validation workshop	The USD rate is the cost of the activity in one district in Ghana	3000	0	3000	0	0
			The USD rate is the cost of the activity in one department in Cdi	1500	0	1500	0	0
		Final report	The USD rate is the cost of the activity in one district in Ghana	6000	0	6000	0	0
			The USD rate is the cost of the activity in one department in Cdi	3000	0	3000	0	0
		Consultative workshop	The USD rate is the cost of the activity in one district in Ghana	3000	0	3000	0	0
			The USD rate is the cost of the activity in one department in Cdi	1500	0	1500	0	0
		Definition of vision and goals	The USD rate is the cost of the activity in one district in Ghana	6000	0	6000	0	0
			The USD rate is the cost of the activity in one department in Cdi	3000	0	3000	0	0
		Spatial Development Scenarios	The USD rate is the cost of the activity in one district in Ghana	9000	0	9000	0	0
			The USD rate is the cost of the activity in one department in Cdi	4500	0	4500	0	0
		Validation workshop	The USD rate is the cost of the activity in one district in Ghana	3000	0	3000	0	0
			The USD rate is the cost of the activity in one department in Cdi	1500	0	1500	0	0
		Final report	The USD rate is the cost of the activity in one district in Ghana	9000	0	9000	0	0
			The USD rate is the cost of the activity in one department in Cdi	4500	0	4500	0	0
		Consultative workshop	The USD rate is the cost of the activity in one district in Ghana	9600	0	9600	0	0
			The USD rate is the cost of the activity in one department in Cdi	4800	0	4800	0	0
		Development strategies	The USD rate is the cost of the activity in one district in Ghana	48000	0	48000	0	0
			The USD rate is the cost of the activity in one department in Cdi	24000	0	24000	0	0
		Validation workshop	The USD rate is the cost of the activity in one district in Ghana	9600	0	9600	0	0
			The USD rate is the cost of the activity in one department in Cdi	4800	0	4800	0	0
		Key strategic projects	The USD rate is the cost of the activity in one district in Ghana	24000	0	24000	0	0
			The USD rate is the cost of the activity in one department in Cdi	12000	0	12000	0	0
		Action plan	The USD rate is the cost of the activity in one district in Ghana	26000	0	26000	0	0
			The USD rate is the cost of the activity in one department in Cdi	13000	0	13000	0	0
		validation workshop	The USD rate is the cost of the activity in one district in Ghana	4800	0	4800	0	0
			The USD rate is the cost of the activity in one department in Cdi	2400	0	2400	0	0
	Phase 3: Operate Phase 4: Maintain	Stakeholder consultation for the adoption of the plan	The USD rate is the cost of the activity in one district in Ghana	3000	0	3000	0	0
			The USD rate is the cost of the activity in one department in Cdi	1500	0	1500	0	0
		Dissemination of plan	The USD rate is the cost of the activity in one district in Ghana	15200	0	15200	0	0
			The USD rate is the cost of the activity in one department in Cdi	7600	0	7600	0	0
		Operation, management, monitoring and evaluation	The USD rate is the cost of the activity in one district in Ghana	11000	5500	5500	0	0
			The USD rate is the cost of the activity in one department in Cdi	38500	19250	19250	0	0
	Travel and DSA	Travel in Ghana	Cost of a 5 days mission to Ghana (300 USD per day DSA + 2000 USD flight a/r)	14000	3500	3500	3500	3500
		Travel Cdi	Cost of a 5 days mission to Cdi (200 USD per day DSA + 2000 USD flight a/r)	12000	3000	3000	3000	3000
Subtotal				**557000**	**129050**	**414950**	**6500**	**6500**
2.2.1. On-the-job trainings and workshops to strengthen capacity of the Ministries of the Environment and Sustainable Development and of Planning and Development and municipalities, Department (Cdi), and of Land Use Spatial Planning Authority (LUSPA) and Municipal District Assemblies (MMDAs) (Ghana) to develop, implement, and update spatial development frameworks, to develop, use and update spatial development frameworks	Guiding LUSPA and MMDAs to conduct activities above	Spatial planner (international)-one per country	The rate USD if the monthly salary for one intamational consultant (in Ghana)	65000	30000	35000	0	0
			The rate USD if the monthly salary for one intamational consultant (in Cdi)	65000	30000	35000	0	0
		Spatial planner (national))	The rate USD if the monthly salary for one intamational consultant (in Ghana)	32500	15000	17500	0	0
			The rate USD if the monthly salary for one intamational consultant (in Cdi)	32500	15000	17500	0	0
		Climate change assessment and mainstreaming specialist	The rate USD if the monthly salary for one intamational consultant (in Ghana)	36000	18000	18000	0	0
			The rate USD if the monthly salary for one intamational consultant (in Cdi)	36000	18000	18000	0	0
		Travel in Ghana	Cost of a 5 days mission to Ghana (300 USD per day DSA + 2000 USD flight a/r)	14000	7000	7000	0	0
		Travel Cdi	Cost of a 5 days mission to Cdi (200 USD per day DSA + 2000 USD flight a/r)	12000	6000	6000	0	0
Subtotal				**293000**	**139000**	**154000**	**0**	**0**
TOTAL Component 2				**1724600**	**892800**	**799300**	**19500**	**13000**
Output 3.1. Community-level plans (11 in Ghana and 10 Cote d'Ivoire) developed with the purpose to plan, operate, maintain, monitor and sustain/replicate concrete adaptation measures deriving from the	Community mobilisation / awareness (Ghana)	Radio, brochures, posters etc.	Rate USD: cost of Material per community (multiplied then by od communities, in column L) for Ghana	55000	55000	0	0	0
	Community mobilisation / awareness (Cdi)	Radio, brochures, posters etc.	Rate USD: cost of Material per community (multiplied then by od communities, in column L) for Cdi	50000	50000	0	0	0
	Community management in Ghana	CREMA_Engagement with Wildlife Division, Traditional Councils and District Assembly	Workshop in Ghana	8700	8700	0	0	0
		CREMA_Awareness to ensure a buy-in by the communities and their leaders	Workshop in Ghana	27500	27500	0	0	0
		CREMA_Validation of maps; biophysical, land use and socio-cultural	Workshop in Ghana	12500	12500	0	0	0
		CREMA_Community representation and election of CRMCs	Workshop in Ghana	12500	12500	0	0	0
		CREMA_Election and inauguration of CREMA Executive Committees	Workshop in Ghana	14500	0	14500	0	0
		CREMA_Validation and adoption of CREMA constitution	Workshop in Ghana	14500	0	14500	0	0
		CREMA_Draft of the CREMA By-laws and promulgation by the District Assembly	Meeting in Ghana	7500	0	7500	0	0
		Gazette CREMA by-law	Procedure in Ghana	7500	0	7500	0	0

	Community management in CDI	Engagement of relevant associations, awareness rasining, validation of baseline ifnormation	Workshop in CdI	25000	25000	0	0	0
		Election and inauguration of the Committees	Workshop in CdI	25000	25000	0	0	0
		Draft of the constitution of the management strategy	Workshop in CdI	30000	30000	0	0	0
		Acceptance and unpdate of Community by-law	Procedure in CdI	20000	20000	0	0	0
	Concrete interventions planning in Ghana		Workshop	27500	27500	0	0	0
	Concrete interventions planning in CdI		Workshop	25000	25000	0	0	0
	Concrete interventions start-up/operation in Ghana		Workshop	27500	0	27500	0	0
	Concrete interventions start-up/operation in CdI		Workshop	25000	0	25000	0	0
	Concrete interventions maintenance and management in Ghana		Workshop	27500	0	0	27500	0
	Concrete interventions maintenance and management in CdI		Workshop	25000	0	0	25000	0
	Concrete intervention replication options and monitoring in Ghana		Workshop	27500	0	0	27500	0
	Concrete intervention replication options and monitoring in CdI		Workshop	25000	0	0	25000	0
	Verification operation, maintenance, monitoring and replication in Ghana		Workshop	27500	0	0	27500	0
	Verification operation, maintenance, monitoring and replication in CdI		Workshop	25000	0	0	25000	0
	Community plans manager in Ghana		The salary is multiplied for two people under the "Rate USD". The task of these people (one per country) relate to the above activities and development of plans (implementation, maintenance, resource management and monitoring)	75000	15000	30000	30000	0
	Community plans manager in CdI		The salary is multiplied for two people under the "Rate USD". The task of these people (one per country) relate to the above activities and development of plans (implementation, maintenance, resource management and monitoring)	75000	15000	30000	30000	0
	Community mobilise/trainers in Ghana		The salary is multiplied for eight people under the "Rate USD".	300000	60000	120000	120000	0
	Development of CREMA constitution		Rate USD: Staff time of one person	20000	0	20000	0	0
	Community mobilizers for CdI		The salary is multiplied for eight people under the "Rate USD".	300000	60000	120000	120000	0
	Development of community management mechanisms constitution id CdI		Rate USD: Staff time of one person	20000	0	20000	0	0
	Selection and contracting of local staff in Ghana		Staff (consultants) (cost for a total of two per country-, per month)	210000	30000	60000	60000	60000
	Selection and contracting of local staff in CdI		Staff (consultants) (cost for a total of two per country-, per month)	210000	30000	60000	60000	60000
	office space set up for local staff 1 per country in Ghana		the Rate USD corresponds to the cost of set-up/equipment for one office (and we will have one office per Country, for a total 1 office, as in column L)	4080	4080	0	0	0
	office space set up for local staff 1 per country in CdI		the Rate USD corresponds to the cost of set-up/equipment for one office (and we will have one office per Country, for a total 1 office, as in column L)	4080	4080	0	0	0
	Travel and DSA in Ghana		Cost of a 5 days mission to Ghana (300 USD per day DSA + 2000 USD flight a/r)	38500	7000	10500	10500	10500
	Travel and DSA CdI		Cost of a 5 days mission to CdI (200 USD per day DSA + 2000 USD flight a/r)	30000	3000	9000	9000	9000
Sub-total				1859360	546860	576000	597000	139500
3.2.1. Establishement of EWs	Phase 1: Preparation	Studies fees and Experts in Ghana	Rate of USD is for one person working one month doing desk research (two people per country are expected to work at the reseach)	10.000	10.000	-	-	-
		Studies fees and Experts in CdI	Rate of USD is for one person working one month doing desk research (two people per country are expected to work at the reseach)	10.000	10.000	-	-	-
		Analysis of the existing informal systems in place and available hydrometeorological data, assessment of EWS regulations and standards at country and local level Detail flood risk screening based on available data	Event/workshop (multiplied by number of communities, which is 11 in Ghana)	27.500	27.500	-	-	-
		Analysis of the existing informal systems in place and available hydrometeorological data, assessment of EWS regulations and standards at country and local level Detail flood risk screening based on available data	Event/workshop (multiplied by number of communities, which is 10 in CdI)	20.000	20.000	-	-	-
		Participatory mapping and detail identification of the evacuation center and routes in concerned communities, in Ghana	Consultation happening during the events	-	-	-	-	-
		Participatory mapping and detail identification of the evacuation center and routes in concerned communities, in CdI	Consultation happening during the events	-	-	-	-	-
		Technical visit to define adequate equipments.Definition of the necessary meteorological and hydro equipment to be installed Identification of the needs in terms of equipment, including IT, capacity building and institutional strengthening in Ghana	Studies fees and Experts in Ghana	10.000	10.000	-	-	-
		Technical visit to define adequate equipments.Definition of the necessary meteorological and hydro equipment to be installed Identification of the needs in terms of equipment, including IT, capacity building and institutional strengthening in CdI	Studies fees and Experts in CdI	10.000	10.000	-	-	-
		Buying materials: Equipments of EWS (Automatic weather stations, rain gauges, flooding monitoring, sirens, lifeboat, life jackets, etc.) in Ghana	budget for the material per community in Ghana	440.000	440.000	-	-	-
		Buying materials: Equipments of EWS (Automatic weather stations, rain gauges, flooding monitoring, sirens, lifeboat, life jackets, etc.) in CdI	budget for the material per community in CdI	320.000	320.000	-	-	-
	Phase 2: Operation	Early Warning System construction. Set up automatic stations for real time monitoring of floods and install the automated sirens. Installation of hydrometeorological equipment, including warning messages disseminations kit in ghana	Set up of the EWS stations. Cost per district (3 districts in Ghana)	30.000	-	30.000	-	-
		Early Warning System construction. Set up automatic stations for real time monitoring of floods and install the automated sirens. Installation of hydrometeorological equipment, including warning messages disseminations kit in CdI	Set up of the EWS stations. Cost per district (3 districts in CdI)	20.000	-	20.000	-	-
		Technical trainning in Ghana	Staff cost two per country, 12 months	72.000	-	72.000	-	-
		Technical trainning in CdI	Staff cost two per country, 12 months	72.000	-	72.000	-	-
		Evacuation Plan (Evacuation centre and routes) design through participatory approach with the concerned communities. Mark escape routes and improve evacuation routes from disaster prone areas to evacuation centres (in Ghana)	Consultation workshop, cost per community	27.500	-	27.500	-	-
			Studies fees (cost of the study per country)	10.000	-	10.000	-	-
		Evacuation Plan (Evacuation centre and routes) design through participatory approach with the concerned communities. Mark escape routes and improve	Consultation workshop, cost per community	20.000	-	20.000	-	-
			Studies fees (cost of the study per country)	10.000	-	10.000	-	-
		Validation and training workshops. Validation the evacuation centre and routes with communities representatives. In Ghana	Cost of the event (per community)	27.500	-	27.500	-	-
		Validation and training workshops. Validation the evacuation centre and routes with communities representatives. In CdI	Cost of the event (per community)	20.000	-	20.000	-	-
		Develop a communication and coordination strategy, counting with local authorities as well as community representatives, on the use/maintenance of river water gauges and warning, including automatic alarm and/or radio, phones and megaphones. In Ghana	Cost of the strategy, draft per district	15.000	-	-	15.000	-
		Develop a communication and coordination strategy, counting with local authorities as well as community representatives, on the use/maintenance of river water gauges and warning, including automatic alarm and/or radio, phones and megaphones. In CdI	Cost of the strategy, draft per district	10.000	-	-	10.000	-
		Buying materials to disseminate warning messages (flags, sirens, signaling, speakers, etc) in Ghana	Buldget for communication materila (per community)	55.000	-	-	55.000	-
		Buying materials to disseminate warning messages (flags, sirens, signaling, speakers, etc) in CdI	Buldget for communication materila (per community)	40.000	-	-	40.000	-
		Deliver training on the alarm system and escape routes to be properly marked. Local leaders will be trained to facilitate evacuation of vulnerable groups and take community action to guard the sirens and private property. Women will be encouraged to partake as evacuation guides (in Ghana)	Training cost per district	15.000	-	-	15.000	-
		Deliver training on the alarm system and escape routes to be properly marked. Local leaders will be trained to facilitate evacuation of vulnerable groups and take community action to guard the sirens and private property. Women will be encouraged to partake as evacuation guides (in CdI)	Training cost per district	10.000	-	-	10.000	-
	Phase 3: Monitoring and Maintenance	EWS Central Data Management in Ghana	Studies fees per country	30.000	-	-	30.000	-
		EWS Central Data Management in CdI	Studies fees per country	30.000	-	-	30.000	-
		Detailed weather information and data management + Disaster information sharing system (L-Alert) in Ghana	Cost of the activity per community	27.500	-	27.500	-	-
		Detailed weather information and data management + Disaster information sharing system (L-Alert) in Ghana	Cost of the activity per community	20.000	-	20.000	-	-
		Workshops: Facilitating coordination among districts and information	Cost of the workshop per district	9.000	-	-	-	9.000
		Workshops: Facilitating coordination among districts and information	Cost of the workshop per district	6.000	-	-	-	6.000

		Institutional framework/ Governance instruments. Review and provide recommendation of relevant national, regional and local rules, regulations, standards and procedures/lessons learned in Ghana	Staff cost (one person, one month, per country)	5.000	-	5.000	-	-
		Institutional framework/ Governance instruments. Review and provide recommendation of relevant national, regional and local rules, regulations, standards and procedures/lessons learned in Cdl	Staff cost (one person, one month, per country)	5.000	-	5.000	-	-
		Validation and training workshops. Raise awareness and conduct trainings (regular drills).		-	-	-	-	-
				-	-	-	-	-
		Field monitoring _ for the maintenance in Ghana	Mid-project monitoring and final mobitoring (one week each)	27.500	-	-	-	27.500
		Field monitoring _ for the maintenance in Cdl	Mid-project monitoring and final mobitoring (one week each)	20.000	-	-	-	20.000
		Travel costs and DSAs for Ghana	Cost of a 5 days mission to Ghana (300 USD per day DSA + 2000 USD flight a/r)	28.000	7.000	7.000	7.000	7.000
		Travel costs and DSAs for Cdl	Cost of a 5 days mission to Cdl (200 USD per day DSA + 2000 USD flight a/r)	24.000	6.000	6.000	6.000	6.000
			Supervision and coordination (done by the local staff already on site)					
Subtotal				**1.533.500**	**860.500**	**375.500**	**218.000**	**75.500**
3.2.2. Integrated NBS for urban flood adaptation	Phase 1: Preparation	Staff (4 consultants in Ghana, for 6 months: 4 months of study and 2 of design)	The USD rate refers to the cost of 4 poeple during one month	48.000	48000	0	0	0
		Staff (4 consultants in Cdl for 6 months: 4 months of study and 2 of design)	The USD rate refers to the cost of 4 poeple during one month	48.000	48.000	0	0	0
		Studies fees and equipments in Ghana	Cost of the ingeneering study, per location	49.500	49500	0	0	0
		Studies fees and equipments in Cdl	Cost of the ingeneering study, per location	33.000	33000	0	0	0
		Stakeholder meeting and validation of project intervention sites (workshops)	Cost of the event (per community)	22.500	22500	0	0	0
		Stakeholder meeting and validation of project intervention sites (workshops)	Cost of the event (per community)	15.000	15000	0	0	0
	Phase 2: Operation	Micro-bioretention cell/rain garden (materials and personel)_Ghana	cost of micro-retention cell per community in Ghana	232.200	0	232200	0	0
		Micro-bioretention cell/rain garden (materials and personel)_CDI	cost of micro-retention cell per community in Cdl	206.400	0	206400	0	0
		Drainage channels/bioswales (materials and personel)_Ghana	cost of restoration of drainage channels per community (staff+material) in Ghana	360.000	0	360000	0	0
		Drainage channels/bioswales (materials and personel)_Cdl	cost of restoration of drainage channels per community (staff+material) in Cdl	240.000	0	240000	0	0
		Seasonal stormwater retention basin (materials and personel)_Ghana	Cost of the seasonal stormwater	100.000	0	0	100000	0
		Flooding assessment and infiltration capacity assessments in Ghana	The USD rate is the cost of the assessement fper district	7.500	0	0	0	7500
		Flooding assessment and infiltration capacity assessments in Cdl	The USD rate is the cost of the assessement fper district	5.000	0	0	0	5000
		Maintenance. Rain garden and micro-bioretention maintenance and ispection (grass cutting; removal of sediments, vegetation maintenance, etc.)_Ghana	cost of the maitenance per community in Ghana	9.450	0	0	0	9450
		Maintenance. Rain garden and micro-bioretention maintenance and ispection (grass cutting; removal of sediments, vegetation maintenance, etc.)_Cdl	cost of the maitenance per community in Cdl	10.200	0	0	0	10200
		Maintenance. Bioswale vegetation maintenance and inspection (grass cutting and removal; removal of sediment)_Ghana	cost of the maitenance per community in Ghana	14.688	0	0	0	14688
		Maintenance. Bioswale vegetation maintenance and inspection (grass cutting and removal; removal of sediment)_Cdl	cost of the maitenance per community in Cdl	10.284	0	0	0	10284
		Maintenance. Seasonal strowater detention basin maintenance and ispection (grass cutting and removal; removal of sediment)_Ghana	cost of the maitenance per community in Ghana	6.800	0	0	0	6800
		Travel costs and DSAs for Ghana	Cost of a 5 days mission to Ghana (300 USD per day DSA + 2000 USD flight a/r)	28.000	7000	7000	7000	7000
		Travel costs and DSAs for Cdl	Cost of a 5 days mission to Cdl (200 USD per day DSA + 2000 USD flight a/r)	18.000	3000	6000	6000	3000
		Coordination support	Supervision and coordination (done by the local staff already on site)	0	0	0	0	0
				1.464.522	**226000**	**1051600**	**113000**	**73922**
3.2.3. Mangrove restoration	Phase 1: Preparation	Detailed engineering study and design	Staff (2 consultants, in Ghana for 2 months)	12.000	12.000	0	0	0
			Staff (2 consultants, in Cdl, for 2 months)	12.000	12.000	0	0	0
			Engeneering studies costs: Hydrodynamics, soil typology and biodiversity studies equipment, travel costs in Ghana	10.000	10.000	0	0	0
			Engeneering studies costs: Hydrodynamics, soil typology and biodiversity studies equipment, travel costs in Cdl	10.000	10.000	0	0	0
		Buying materials	Matlock, wellington boots, cutlasses (1 in Ghana)	3.820	3820	0	0	0
			Matlock, wellington boots, cutlasses (1 in Cdl)	3.820	3820	0	0	0
		Mangrove nursery	Site leasing in Ghana	1.800	300	1500	0	0
			Site leasing in Cdl	1.800	300	1500	0	0
			Construction of small wooden shelter for storage (including materials, personnel, and transport) in Ghana	5.170	5170	0	0	0
			Construction of small wooden shelter for storage (including materials, personnel, and transport) in Cdl	5.170	5170	0	0	0
			Fencing in Ghana	6.800	6800	0	0	0
			Fencing in Cdl	6.800	6800	0	0	0
			Nursery bed and bag preparation, collection of soil to site, manure and transport to site (in Ghana)	50.000	50000	0	0	0
			Nursery bed and bag preparation, collection of soil to site, manure and transport to site (in Cdl)	50.000	50000	0	0	0
		Wildlings/seeds	Materials and personnel_Ghana	574.275	0	574275	0	0
			Materials and personnel_Cdl	42.114	0	42113.5	0	0
		Carbon offset inicial documentation	Project Idea Note Review	750	750	0	0	0
			Project Design Document Review	1.800	1800	0	0	0
			Tech Spec Review	1.600	1600	0	0	0
			Additional Tech Spec Review	1.000	1000	0	0	0
		Carbon offset development partner process	Carbon Inventory by Development Partner	30.000	30000	0	0	0
			Food, transport and tools					
		Carbon Validation	Validation Coordination & Report Review	1.000	1000	0	0	0
			Validation Audit by third party	30.000	30000	0	0	0
		Registration	Registration costs	4.000	4000	0	0	0
	Phase 2: Operation	Mangrove planting	Food, salary for planting workers (100 workers in Ghana, monthly salary for 5 months)	204.120	0	204120	0	0
			Food, salary for planting workers (50 workers in Cdl, monthly salary for 5 months)	102.060	0	102060	0	0
			Food and transport for volunteers (10 USD per persons, 30 people per day during 20 weekends) in Ghana	12.000	0	12000	0	0
			Food and transport for volunteers (10 USD per persons, 15 people per day during 20 weekends) in Cdl	6.000	0	6000	0	0
			Supervisor (2 people for 5 months) in Ghana	15.000	0	15000	0	0
			Supervisor (2 people for 5 months) in Cdl	15.000	0	15000	0	0
		Nursery personnel	Staff cost in Ghana, 12 months	19.200	0	19200	0	0
			Staff cost in Cdl, 12 months	19.200	0	19200	0	0
		Nursery management	Watering, replacement, watering can (including equipement) in Ghana	18.000	0	18.000	0	0
			Watering, replacement, watering can (including equipement) in Cdl	18.000	0	18.000	0	0
		Transport	Car and fuel in Ghana for 5 months	58.000	0	58000	0	0
			Car and fuel in Cdl for 5 months	58.000	0	58000	0	0
			Driver in Ghana for 5 months	8.000	0	8000	0	0
			Driver in Cdl for 5 months	8.000	0	8000	0	0
		Coordination support	Supervision and coordination (1 person in Ghana for 8 months)	20.000	5000	5000	5000	5000
			Supervision and coordination (1 person in Cdl for 8 months)	20.000	5000	5000	5000	5000
			Expert (1 person in Ghana for 30 months)	90.000	22500	22500	22500	22500
			Expert (1 person in Cdl for 30 months)	90.000	22500	22500	22500	22500
		Carbon Audit Cost	*Verification every 5 years (Covered by revenue generated by the Intervention)*	-	0	0	0	0
		Carbon Project Operational Costs	*Annual Reports no-fee*	-	0	0	0	0
			Project developers worker salary (first four years)	28.000	7000	7000	7000	7000
			Expenses for Comitee and Office (first four years)	1.200	300	300	300	300
			Plan Vivo Certificates $0.40 per PVC issued (Covered by revenue generated by the Intervention)	4.672	1168	1168	1168	1168
	Phase 3: Monitoring and Maintenance	Maintenance	*CREMA (Covered by revenue generated by the Intervention)*	0	0	0	0	0
			Extra seeds in case of potential failure (10%)_Ghana	22591	0	0	22591	0
			Extra seeds in case of potential failure (10%)_Cdl	9477,2	0	0	9477,2	0
		Field monitoring	Including accomm, car/fuel, and staff costs in Ghana	13800	0	3450	6900	3450
			Including accomm, car/fuel, and staff costs in Cdl	13800	0	3450	6900	3450
		Travel costs and DSAs for Ghana	Cost of a 5 days mission to Ghana (300 USD per day DSA + 2000 USD flight a/r)	24.500	3500	7000	7000	7000

		Travel costs and DSAs for Cdl		Cost of a 5 days mission to Cdl (200 USD per day DSA + 2000 USD flight a/r)	21.000	3000	6000	6000	6000
	Phase 5: Replicate	*CREMA mechanism*		*Covered by revenue generated by the intervention*	0	0	0	0	0
Sub-total					**1.785.339**	**316.298**	**1.263.337**	**122.336**	**83.368**
3.2.4.Climate resilient agriculture	Phase 1: Preparation	Detailed engineering study and design		Staff (2 consultants for 2 months) in Ghana	20000	20000	0	0	0
				Staff (2 consultants for 2 months) in Cdl	20000	20000	0	0	0
				Studies fees, travels and equipments in Ghana	10000	10000	0	0	0
				Studies fees, travels and equipments in Cdl	10000	10000	0	0	0
				For stakeholders meeting, field work demonstration and water harvesting sensitization in Ghana	38400	38400	0	0	0
				For stakeholders meeting, field work demonstration and water harvesting sensitization in Cdl	19200	19200	0	0	0
	Phase 2:Operation	Water infiltration construction		Prepare surface in Ghana	4200	0	0	4200	0
				Prepare surface in Ghana	2100	0	0	2100	0
				Provide and place bondless in trench in Ghana	117000	0	0	117000	0
				Provide and place bondless in trench in Cdl	58500	0	0	58500	0
				Excavating trench, providing and placing concrete in Ghana	873900	0	0	873900	0
				Excavating trench, providing and placing concrete in Cdl	436950	0	0	436950	0
				Supervision	0	0	0	0	0
		Realization of training center for salty crops		Farm wells construction (installation of tube wells) in Ghana	4200	0	4200	0	0
				Farm wells construction (installation of tube wells) in Cdl	2100	0	2100	0	0
				Drip irrigation equipement (including installation) and toolkit for soil sampling and salinity measurements in Ghana	25800	0	25800	0	0
				Drip irrigation equipement (including installation) and toolkit for soil sampling and salinity measurements in Cdl	12900	0	12900	0	0
				Pre-sowing land clearing and preparation, construct cultivation beds, seeds, fertilizers, and land lease in Ghana	42550	0	14800	14800	12950
				Pre-sowing land clearing and preparation, construct cultivation beds, seeds, fertilizers, and land lease in Cdl	20350	0	9250	9250	1850
				Pumps for training center in Ghana	5000	0	5000	0	0
				Pumps for training center in Cdl	5000	0	5000	0	0
				Farm logistics, costs of running irrigation facility	23000	0	8000	8000	7000
				Farm logistics, costs of running irrigation facility	11000	0	5000	5000	1000
				Farm house construction in Ghana	10000	0	10000	0	0
				Farm house construction in Cdl	10000	0	10000	0	0
				Develop layout and assistance in Ghana	43740	0	43740	0	0
				Develop layout and assistance in Cdl	43740	0	43740	0	0
		Training costs		Preparation training material in Ghana	10560	0	10560	0	0
				Preparation training material in Cdl	10560	0	10560	0	0
				Assistence during crop season, off-site in Ghana	47520	0	15840	15840	15840
				Assistence during crop season, off-site in Cdl	47520	0	15840	15840	15840
				training materials (handouts/protocols) in Ghana	48000	0	16000	16000	16000
				training materials (handouts/protocols) in Cdl	33600	0	11200	11200	11200
				Soil management tools and material in Ghana	9000	0	3000	3000	3000
				Soil management tools and material in Cdl	9000	0	3000	3000	3000
				Develop approach (rain)water harvesting	14000	0	7000	7000	0
				Develop approach (rain)water harvesting	7000	0	7000	0	0
				Supervision, monitoring and reporting (Development Institute) in Ghana	72000	0	28800	28800	14400
				Supervision, monitoring and reporting (Development Institute) in Cdl	72000	0	28800	28800	14400
				Project monitoring and reporting in Ghana	60000	0	24000	24000	12000
				Project monitoring and reporting in Cdl	60000	0	24000	24000	12000
				Analysis and development of sustainable economic models in Ghana	15000	0	5000	5000	5000
				Analysis and development of sustainable economic models in Cdl	15000	0	5000	5000	5000
				ensure seed availability of new crop varieties in Ghana	3168	0	1056	1056	1056
				ensure seed availability of new crop varieties in Cdl	3168	0	1056	1056	1056
				organize farmer field day (The Development Institute) in Ghana	6000	0	2000	2000	2000
				organize farmer field day (The Development Institute) in Cdl	6000	0	2000	2000	2000
				Evaluation of results and refinement "best practise" for next season in Ghana	25344	0	8448	8448	8448
				Evaluation of results and refinement "best practise" for next season in CDI	25344	0	8448	8448	8448
		Coordination support		Expert in Ghana	18000	0	18000	0	0
				Expert in Cdl	18000	0	18000	0	0
				Supervision and coordination (20 %) in Ghana	30000	5000	10000	10000	5000
				Supervision and coordination (20 %) in Cdl	30000	5000	10000	10000	5000
		Travel and DSAs		Cost of a 5 days mission to Ghana (300 USD per day DSA + 2000 USD flight a/r)	14000	3500	3500	3500	3500
				Cost of a 5 days mission to Cdl (200 USD per day DSA + 2000 USD flight a/r)	9000	0	3000	3000	3000
Sub-total					**2588414**	**131100**	**500638**	**1766688**	**189988**
3.3.1. Trainings for Municipal staff and communities targeting sub-projects implementation and/or maintenance	**On the job training during the development of community plans (3.1.1);**			Staff visiting and supporting the development of the communiy plans implementation in Ghana	6000	0	6000	0	0
				Staff visiting and supporting the development of the communiy plans implementation in Cdl	4000	0	4000	0	0
	Trainings, grouping 2 to 4 communities (for a total of three training locations in Ghana and two in Cdl) for urban flood resilience			Engineering study trainings in Ghana (40% of this budget is for women only; 15% for youth only)	6000	0	6000	0	0
				Engineering study trainings in Cdl (40% of this budget is for women only; 15% for youth only)	4000	0	4000	0	0
				bioswale (construction) in Ghana (40% of this budget is for women only; 15% for youth only)	6000	0	0	6000	0
				bioswale (construction) in Cdl (40% of this budget is for women only; 15% for youth only)	4000	0	0	4000	0
				rain garden (construction) in Ghana (40% of this budget is for women only; 15% for youth only)	6000	0	0	6000	0
				rain garden (construction) in Cdl (40% of this budget is for women only; 15% for youth only)	4000	0	0	4000	0
				bioretention (construction) in Ghana (40% of this budget is for women only; 15% for youth only)	6000	0	0	6000	0
				bioswale (M&M) in Ghana (40% of this budget is for women only; 15% for youth only)	6000	0	0	0	6000
				bioswale (M&M) in Cdl (40% of this budget is for women only; 15% for youth only)	4000	0	0	0	4000
				rain garden (M&M) in Ghana (40% of this budget is for women only; 15% for youth only)	6000	0	0	0	6000
				rain garden (M&M) in Cdl (40% of this budget is for women only; 15% for youth only)	4000	0	0	0	4000
				bioretention (M&M) (40% of this budget is for women only; 15% for youth only)	6000	0	0	0	6000
	Trainings, grouping 2 to 4 communities (for a total of three training locations in Ghana and two in Cdl) for per-urban sustainable and resilient agriculture			Climate-resilient soil management in Ghana (40% of this budget is for women only; 15% for youth only)	6000	0	6000	0	0
				Climate-resilient soil management in Cdl (40% of this budget is for women only; 15% for youth only)	4000	0	4000	0	0
				Salt-resilient crops adoption in Ghana (40% of this budget is for women only; 15% for youth only)	6000	0	6000	0	0
				Salt-resilient crops adoption in Cdl (40% of this budget is for women only; 15% for youth only)	4000	0	4000	0	0
				Urban -Agriculture land management in Ghana (40% of this budget is for women only; 15% for youth only)	6000	0	6000	0	0
				Urban -Agriculture land management in Cdl (40% of this budget is for women only; 15% for youth only)	4000	0	4000	0	0
	Trainings, grouping 2 to 4 communities (for a total of three training locations in Ghana and two in Cdl) for solid waste management			SWM training in Ghana (40% of this budget is for women only; 15% for youth only)	6000	6000	0	0	0
				SWM training in Cdl (40% of this budget is for women only; 15% for youth only)	4000	4000	0	0	0
	Staff cost			Trainer in Ghana	27000	2250	11250	6750	6750
				Trainer in Cdl	15000	1500	7500	3000	3000
		Travel costs and DSAs for Ghana		Cost of a 5 days mission to Ghana (300 USD per day DSA + 2000 USD flight a/r)	28000	7000	7000	7000	7000
		Travel costs and DSAs for Cdl		Cost of a 5 days mission to Cdl (200 USD per day DSA + 2000 USD flight a/r)	24000	6000	6000	6000	6000
Sub-total					**206.000**	**26.750**	**81.750**	**48.750**	**48.750**
TOTAL Component 3					**9.437.135**	**2.107.508**	**3.852.825**	**2.865.774**	**611.028**
TOTAL Components					11.694.235	3.202.808	4.734.125	3.019.774	737.528
Project execution costs									
Project execution			Cote d'Ivoire	Regional Spatial planning coordinator (international P2 40%)	-	-	-	-	-
				Admin / financial procurement (national)	**100.000**	25.000	30.000	30.000	15.000
				Safeguarding system (AF) compliance (national)	**30.000**	7.500	7.500	7.500	7.500
				M & E and communication (national)	**70.000**	17.500	22.500	22.500	7.500
			Ghana	National Project coordination (national)	**224.000**	80.000	96.000	48.000	-
				Admin / financial procurement (national)	**70.000**	25.000	30.000	15.000	-
			Travel	Travel	**32.000**	12.000	8.000	8.000	4.000

			Operations	Vehicle Operations & Maintenance	**31.000**	9.000	9.000	9.000	4.000
				Office Rent	**86.000**	24.000	24.000	24.000	14.000
				Communication / publication / printing	**18.000**	4.000	4.000	4.000	6.000
				Office Supplies, Stationery, Computers	**14.000**	8.000	2.000	2.000	2.000
			Final evaluation	Independent (lump sum)	**42.000**	-	-	-	42.000
TOTAL Execution costs			**9,29%**		**1.197.000**	**332.000**	**377.000**	**314.000**	**174.000**
TOTAL Project costs					**12.891.235**	**3.534.808**	**5.111.125**	**3.333.774**	**911.528**
Project cycle management fee costs									
Project cycle management			**1,38%**	UN-H ROAf overall project supervision and M &E, incl. AF and UN-H policies (esp ESP and GP) and regulations compliance (Senior Human Settlements officer 5% + PMO 5% + PMA 25 % + M & E)	**177.900**	67.634	65.550	36.274	8.442
			0,12%	UN-H ROAf Travel	**15.469**	4.242	6.133	4.000	1.094
			7%	UN-H HQ Overall project supervision, incl .compliance to UN-H policies (gender, human rights, climate change, etc.)	**902.386**	247.437	357.779	233.364	63.807
TOTAL management fee			**8,50%**		1.095.755	319.312	429.462	273.638	73.343
TOTAL amount of financing requested					**13.986.990**	**3.854.120**	**5.540.586**	**3.607.413**	**984.871**

Table 34 Budget notes

M&E								
Type of M & E Activity	**Activity**	**Entity**	**Row**	**Total**	**1**	**2**	**3**	**4**
Measurements of means of verification (baseline assessment and M & E plans) as part of inception	Inception Workshop	AbC		**3.300**	3.300			
	Reports preparation and EE compliance to AF ESP and GP	UN-H ROAf		**-**	See Overall project monitoring and evaluation (from cycle management fee)			
Direct Project Monitoring and Quality Assurance including annual progress and financial reporting, project revisions, technical assistance and ESP and GP compliance (from execution fee M & E and safeguards)	M & E UN-H offices	UN-H National offices		**107.500**	32.500	30.000	30.000	15.000
Overall project monitoring and evaluation (from cycle management fee)		UN-H ROAf		**15.469**	4.242	6.133	4.000	1.094
Audits	In line with AF requirements	OIOS		**-**	-	-	-	-
Terminal external evaluation		Independent		**56.000**				56.000
Total				**182.269**	**40.042**	**36.133**	**34.000**	**72.094**
From Project Execution fee				163.500	32.500	30.000	30.000	71.000
From Project Cycle Management fee				15.469	4.242	6.133	4.000	1.094

Table 35 M&E

ANNEX 1: VULNERABILITY ANALYSIS AND MCA SELECTION OF PROJECT AREAS FOR THE SUBPROJECTS OUTCOME 3.2.

As **mentioned** under section II.A, the selection of areas of interventions for the subprojects, was based on a Multi-criteria analysis (MCA). Criteria of the analysis are: i) CC environmental-social-financial (economic) impacts; ii) Beneficiaries impact; iii) Vulnerable groups ratio; iv) Geographical impact; v) Alignment with government priorities.

1.1 Coastal areas analysis in Côte d'Ivoire for area selection

As previously mentioned in the Background section, the Ivorian coastline is extremely vulnerable to both coastal flooding and erosion.

The coastline is 566 km long and consists of a variety of coastal habitats including coastal lagoons, estuaries, mangroves, swamps and humid zones. The coastal area can be divided into three zones based on geomorphology. The first zone is from Cape of Palmas to Sassandra and is characterized by a rocky coast and an elevation above 10 meters. The second zone goes from Sassandra to Abidjan and is covered by coastal cliffs. Finally, the third zone from Abidjan to Cape of Three is composed of sandy beaches and lies slightly above sea level (0-10m). Due to their different characteristics, the Levels of vulnerability vary from one region to another, and it is therefore important to identify the areas at highest risk to prioritize as main targets for this project. The Third zone (also called the Greater Abidjan area) is composed of the districts of Abidjan, Agboville, Tiassale, and Grand-Lahou. and is the most densely populated because of its rapidly growing populations and migration of rural communities to urban areas in search of better opportunities. The area concentrates more than 30% of the national population. Due to this, unplanned development and urban sprawl occurred leading the city to extend in areas where (natural) hazards were higher.

Based on the fact that the coastal communities and assets within the Great Abidjan region (or Third zone) are most at risk, the project decided to concentrate efforts in this area. To select which departments and communities within the region will be included in this project, a prioritization process using a multi-criteria methodology was conducted to ensure evidence-based selection. The parameters included in this multi-criteria methodology are environmental and socio-economic impacts, vulnerable groups, beneficiaries, geographical impact, and alignment with national priorities.

The prioritization process was conducted using a matrix where the different parameters were given a score for each of the areas to be prioritized. Ultimately, the prioritization was done by ranking the areas from the highest to the lowest values. As per the table below, the prioritized departments are Port-Bouet, Grand-Bassam, and Jacqueville. However, due to ongoing investments in Port Bouet the department was excluded to avoid duplication. Therefore, the final selected departments are **Grand-Bassam and Jacqueville.**

Annex Table 1 Prioritization of target areas. Côte d'Ivoire.

	Prioritization criteria							PRIORITY
Department/ commune	CC environmental-social-financial (economic) impacts	Beneficiaries impact	Vulnerable groups ratio	Geographical impact			Alignment with government priorities	
				m/year	%	Final		
Jacqueville								3
Bingerville								1
Grand-Bassam								2
Cocody								4
Port Bouet								1

The selection and prioritization highlighted in this table has been achieved through consultations with stakeholders and communities, as well as by data collection from relevant studies and statistics on the Ivorian coastal dynamics.

1.2 Coastal areas analysis in Ghana for area selection

In order to identify the target areas for the project, results from a vulnerability study have been used. This study, Mapping Vulnerability and Risk of Ghana's Coastline to Sea Level Rise, is a collaboration between the University of Ghana and the University of Portsmouth in 2016.[89] It entails a detailed assessment at district level through the

[89] Boateng, Isaac.Jayson-Quashigah, Philip. 2016.Mapping Vulnerability and Risk of Ghana's Coastline to Sea Level Rise.

Coastal Vulnerability Index-based methodology, which provides a vulnerability ranking. This results from the analysis and correlation of key variables influencing coastal change. These variables include geomorphology characteristics such as coastal slope or wave heights, and socio-economic dynamics such as population at risk.

Annex Figure 1 Coastal Vulnerability Index to sea level rise and coastal flooding and erosion. Ghana

The study shows how 36% of the coastline has very high levels of vulnerability. The Eastern part of the coast presents the highest erosion rates, 3.9 m/year, compared to the Central and Western areas that have values of 2.7 m/year and 1.6 m/year, respectively.[90] Another study estimates that under a scenario of 2 m sea level rise, around 5,000 km^2 of the eastern districts will be impacted by floods.[91] There are four coastal regions in the country, Western, Central, **Greater Accra, and Volta**. This proposal will focus on the latter two that are located on the eastern part of the coast, based on their higher vulnerability values, and the evaluation of socio-economic and environmental assets presented below.

In terms of socio-economic resources, Greater Accra and Volta regions while having 24% of the land, host 44% of the national population[92] and over 60% of major industries (manufacturing, refinery, mining, port and harbour, textile and smelting). Here, population growth is also among the highest in the country, rating at 3.1% in Greater Accra and 2.5% in Volta, according to latest census in 2010. In Volta region, rural growth is the most relevant having a rate of 2.8%.

Annex Figure 2 Population density in Greater Accra and Volta regions. Ghana

Based on highest levels of vulnerability, key environmental assets at risk, and higher need for support in rural areas (where less investment and initiatives take place), the project will concentrate on the eastern part of these two regions. This means out of the 8 coastal districts, Ga South, Accra Metropolitan, and Tema Metropolitan, were excluded from the final selection process. The remaining districts are included in the project and are Ningo-Prampram, Ada East, Ada West, Anloga/ Keta, and Ketu. The selection of these districts was done according to a prioritization process using a multi-criteria methodology to ensure evidence-based selection. The parameters included in a multi-criteria

[90] Giardino.A., et al. 2017. A quantitative assessment on human interventions and climate change on the West African sediment budget.
[91] Adortse. P., 2019. Coastal flood hazard assessment for Ghana.
[92] Ministry of Environment, Science, Technology and Innovation, Town and Country Planning Department, National Development Planning Comission.2015.Ghana National Spatial Development Framework (2015-2035)

methodology are environmental and socio-economic impacts, vulnerable groups, beneficiaries, geographical impact, and alignment with national priorities.

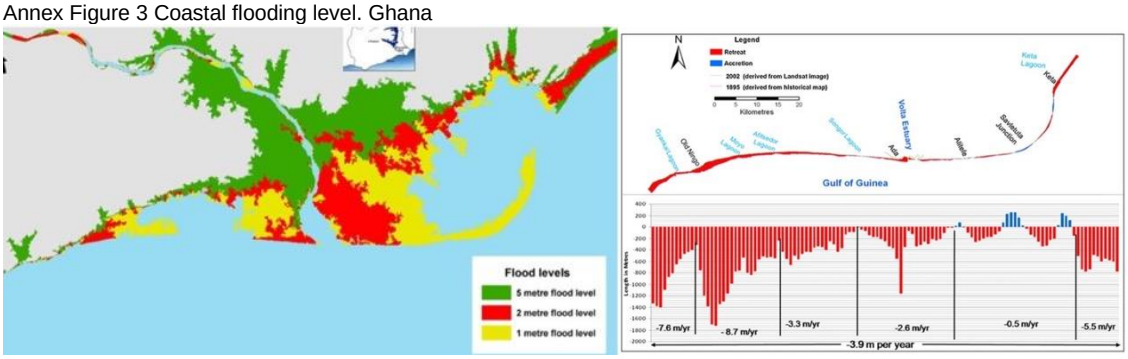
Each of these was weighted according to its relevance and was provided with measurable indicators that ensured an objective evaluation. The prioritization process was conducted using a matrix where the different parameters were given a score for each of the areas to be prioritized. Ultimately, the prioritization was done by ranking the areas from the highest to the lowest values. As per the table below the selected districts are **Anloga/ Keta, Ada East, and Ada West.**

Annex Table 2 Prioritization of target areas. Ghana

	Prioritization criteria							PRIORITY
Districts	Environmental-social-financial (economic) impacts	Beneficiaries impact	Vulnerable groups ratio	Geographical impact			Alignment with government priorities	
				m/year	%	Final		
Ningo-Prampam								5
Ada West								**3**
Ada East								**2**
Anloga/ Keta								**1**
Ketu								4

Evidence for this matrix has been collected from consultations with stakeholders and the communities, as well as from detailed studies that targeted coastal flooding and erosion. As per the maps below, the area of study is in serious threat of flooding, both landward (lagoon water) and seaward (sea water), and coastal recession due to the soft geology, low-lying topography, and the reduction of sediment supply. For example, it highlights how erosion rates are very severe, reaching 2-3m/year in the Volta estuary and 8m/year in Anloga/ Keta. Episodes of shore erosion over the last several decades caused about 70% loss of infrastructure along the coast of Anloga/ Keta.

Annex Figure 3 Coastal flooding level. Ghana



1.3 Summary and characteristics of communities in target areas.

The information provided by the coastal area analysis and the prioritization of the target areas for increasing local adaptive capacity facilitated the identification of the communities that will be directly benefited from the project´s physical interventions that fall under component 3. The following section compiles specific information regarding the main characteristics of each community related to their physical, social, and environmental infrastructure. These specific elements create a unique profile for each community in which most cases, increases their vulnerability to climate change hazards, emphasizing the presence of people and ecosystems that are being adversely affected by coastal-related hazards and other environmental and social threats.

Despite their singularities, all communities share high levels of exposure, sensitivity, and low adaptive capacity to cope with climate change hazards. In all the communities, main income-generating activities and livelihoods are critically compromised. In several communities' other infrastructure challenges surge which make it more difficult to increase coastal resilience, such as lack of basic sanitization infrastructure or weak agriculture practices. The information was provided directly by communities through the consultative process, and it was rectified by international experts on climate change adaptation in the region.

Communities Cote d´Ivoire

1. **Mondokou - Grand Bassam district**

- **Summary:** The community is vulnerable to impact of the sea level and the Volta River channel. Even though many houses are already elevated, strong floods put in risk the life of the people in the community, also affecting their livelihood, which is currently based on agriculture.
- **Community characteristics:** Mondoukou is a very diverse community, with different ethnics and languages. Due to the soil saturation, the agriculture is weak. There are many hotels located in the seaside, which are also being affected by flooding during raining season. While men are responsible for fishing and agriculture, women have the role of smoking (cooking) the fish and producing flour with cassava. Coconut is used to generate energy.

2. **Quartier France- Grand Bassam district**
- **Summary:** The community is very fragile and susceptible to impact of the sea level rise and sediment accumulation of the lagoon. Even though there are some surface drainage lines and structured roads, floods put in risk the life of the people in the community.
- **Community characteristics:** The Kingdom of Quartier France is an organized community, with a clear hierarch structure. The community is an old village with history from the colonial period expressed in some buildings. Those old area have better infrastructure, such as paved roads, surface drainage system and satellite antenna. There is agriculture in the garden of some houses, creating a low-density pattern.

3. **Azzuretti- Grand Bassam district**
- **Summary:** The settlement is in a narrow land between the ocean and the lagoon and is very vulnerable to flooding as a result of lagoon and sea level rise and accelerated sedimentation of the lagoon. Flood put in risk the lives of the people in the community.
- **Community characteristics**: Large part of the inhabitants have come from other communities that have been invaded by the ocean. Many houses seem recent (similar to temporary shelters), the spatial distribution is organic, and there are no defined streets. Sea-fishing is the main source of food and the main source of income, since and agriculture is weak. Men are also responsible for fishing and women for smoking (cooking) and selling the fish. Wood is used for cooking and general energy. Due to the lack of job opportunities and studies, the youth are moving to Grand Bassam and Abidjan.

4. Vitre 2- Grand Bassam district
- **Summary:** climate change has mainly impacted livelihood: agriculture and fishing. Agriculture has been impacted by the risen temperature and floods; change of water properties in the lagoon has resulted in the reduction of fish. Only houses near the lagoon face floods.
- **Community characteristics:** The settlement follows the lagoon line and is surrounded by water. The access to the community is very weak, making the community very isolated. Although there is a floodable area of the lagoon (lagoon level has risen over the years), most part of the houses are located in a safe distance from the lagoon, making the flood impact to the houses low. The land agriculture is located around 4km from the community and is vulnerable to flooding. Rain pattern change has impacted the agriculture practice and fishing has become more important. Fishing is also challenged by the climate change - as result of sediment accumulation, run-off and property changes, number of fish in the lagoons have reduced.

5. Gran-Jack- Jacqueville district
- **Summary:** the houses along the coastline are vulnerable to floods due to sea level rise and strong rainfall. Climate change has also impacted livelihood – fishing has reduced, and agriculture is challenged by floods and drought.
- **Community characteristics**: The sea property has been affected by the climate change, as result of sediment accumulation, pollution, run-off and property changes, the number of fish in the sea have reduced and has impacted the fishing and agriculture has become more important. A large project of oil and gas is under construction, with pipes in the main road of the community, reducing the land available to agriculture. In the past, the community used to plant coffee and cacao. Around the community, there is a large coconut plantation, with around 600HA, planted by the government.

6. Attotou B- Jacqueville district

- **Summary:** similar to Vitre 2, climate change has mainly impacted livelihood: agriculture and fishing. Agriculture has been impacted by flood but also drought; change of water properties in the lagoon has resulted in the reduction of fish.
- **Community characteristics**: The community is very isolated to the other communities, with difficult access and poor road quality. Similar to Vitre 2, rain pattern change has impacted the agriculture practice and fishing has become more important. The lagoon property has been affected by the climate change - as result of sediment accumulation, pollution, run-off and property changes, the number of fish in the lagoons have reduced and has impacted the fishing production. Men are responsible for fishing and agriculture and women for smoking (cooking) the fish and produce flour with cassava. Coconut is used to generate energy.

7. Koko - Jacqueville district

- **Summary:** Similar to Vitre 2 and Attoutou B, in Koko climate change has mainly impacted livelihood: agriculture and fishing. Floods occur in the agriculture land, roads and in-between buildings closed to the lagoon.
- **Community characteristics**: The settlement follows the coast and is surrounded by water. The population is characterized by kids and elders. Due to the lack of available of opportunities, the youth are leaving to surrounds communities, with better access to education and jobs. Although there is a floodable area closed to the lagoon, the most part of the houses are located in a safe distance from the lagoon, making the flood impact low. There is some vegetation in public spaces and roads in the community, acting as surface drainage. Main activities are agriculture and fishing. Men are responsible for fishing and agriculture and women for smoking (cooking) the fish and produce flour with cassava. Coconut is used to generate energy.

8. Tiemen - Jacqueville district

- **Summary:** The community does not flood, but the drought, risen temperature and erosion are impacting livelihood. Agriculture has become the main activity overfishing.
- **Community characteristics**: The settlement is possibly the most developed of the targeted communities. The community is very diverse with some migrants from Mali, Nigeria, Burkina Faso. The site has seen tensions on land tenure. Since 2018, a private company has been working in a project for subdivision of plots and is negotiating a resettlement to this new place, where the company will build houses and infrastructures and two hotels. The community is in contact with this company and already signed agreements. Previously, the main activity in the community was fishing but due to the climate change effects, resulting on sediment accumulation, pollution, number of fish in the lagoon have reduced. The agriculture become the main activity, with focus on the cassava. The cassava production is also for commercial purpose. There are vegetation and mangrove between the community and the lagoon, the houses are built with a safe distance from the waterpoint and are elevated from the floor, protected from floods.

9. Tefredji - Jacqueville district

- **Summary:** the community is very fragile and susceptible to impact of the sea/lagoon level rise and sediment accumulation. Floods put in risk the life of the people in the community, rather than their source of livelihood.
- **Community characteristics**: It is a very isolated community, to arrive there is necessary a boat and some roads are not accessible to cars. The settlement is structured, with some good buildings. The community is aware of the impacts of the climate change and have already attempted to grow mangrove and built rudimentary drainage channels, however they lack technical knowledge. Adults leave the community seeking for livelihoods opportunities and there are many kids and elders.

10. Taboth – Jacqueville district

- **Summary:** The community does not flood, but the drought, risen temperature and erosion are impacting livelihood.
- **Community characteristics**: Previously the main activity in the community was fishing but due to the climate change effects, resulting on sediment accumulation, pollution, number of fish in the lagoon have reduced. The agriculture become the main activity, with focus on the cassava. The houses are built with

elevated floors, avoiding flash floods. There are few green areas in public spaces, contributing to protect the soil.

Communities in Ghana.

1. Wokumagbe – Ada West District

- **Summary:** The community is very fragile and susceptible to impact of the sea level rise and sediment accumulation of Keta lagoon. Floods put in risk the life of the people in the community, rather than their source of income since the community lives out of sea-fishing.
- **Community characteristics:** Wokumagbe is one of the poorest of the targeted communities. Sanitation system is limited to one public toilet. With weak agriculture practice (vegetables are bought from other communities or from Accra), fishing is the main source of food. Men are responsible for fishing and women for smoking (cooking) the fish. Wood is used for cooking and general energy.

2. Akplabanya- Ada West District

- **Summary:** The community is very fragile and susceptible to impact of the sea level rise and sediment accumulation of Keta lagoon. As Wokumagbe, floods put in risk the life of the people in the community, rather than their source of income since the community lives out of sea-fishing.
- **Community characteristics**: Akpabanya is one of the poorest of the targeted communities, with a growing population of approximately 5.000 people. Large part of the people has come from other neighbouring communities that have been invaded by the ocean. Many houses seem recent (similar to temporary shelters), the spatial distribution is organic, and there are no defined streets. The community lacks basic services, notably sanitation, and the lagoon is deeply polluted. As in Wokumagbe sea-fishing is the main source of food and agriculture is weak. Men are responsible for fishing and women for smoking (cooking) the fish. Wood is used for cooking and general energy.

3. Goi- Ada West District

- **Summary:** The community is susceptible to impact of the sea level rise and sediment accumulation of coastal lagoons. Floods impact only houses near the lagoon but provokes diseases in the community.
- **Community characteristics:** Agriculture is practiced by man and women and is stronger than fishing. Production is sold to Accra and neighbouring communities. A large lagoon area (floodable area) exists between the ocean and the main part of Goi.

4. Kewunor-Azizanya – Ada East District

- **Summary:** Narrow along the remaining land in the estuary, the settlement is very vulnerable to flooding as a result of lagoon and sea level rise, and accelerated sedimentation. A large lagoon area (floodable area) exists between the ocean and the community.
- **Community characteristics**: The settlement is located in the estuary, where the Volta River and the ocean meet. The community is an old fishing village with history from the colonial period expressed in some buildings. Together with fishing, hotels and resorts are important source of income. The site has seen tensions on land tenure and the pressure from the hospitality sector. Dredging has already been done in the past, and although the community faces flooding issues again, the memory of the sort-term benefits dredging is very present.

5. Agorkedzi/Atiteti – Anloga/ Keta District

- **Summary:** The community is susceptible to impact of the sea level rise and sediment accumulation of coastal lagoons. Floods put in risk the life of the people in the community, rather than their source of income since the community lives out of sea-fishing.
- **Community characteristics:** The settlement follows the coast (thing and long) and is surrounded by water. In ‘front’ of Agorkedzi, between the ocean and the houses, there are a number of coastal lagoons. In the ‘back’ of Agorkedzi (northern part), there is a floodable area of the Volta River. The population is continuously moving due to the flooding and constructions are easily spotted. For instance, due to the sea level rise, people living in the very west of Agorkedzi (community called Fuveme), have moved to the north part of Agorkedzi. Fishing is stronger than agriculture. Men are responsible for fishing and women for smoking (cooking) and sell the fish in the traditional market.

6. Agbledomi - Anloga/ Keta District

- **Summary:** The community is vulnerable to sea/lagoon level rise, which impacts mainly the sources of livelihood. Mangrove between the lagoon and the agriculture land has been destroyed throughout the years. Few waterpoints generated small lagoons (floodable area) between the ocean, the community and the agriculture land.
- **Community characteristics:** Rain pattern change has impacted the agriculture practice and fishing has become more important - although fishing is currently the main activity (60%*), agriculture (40%*) is still very strong. Fishing is also challenged by the climate change, as result of sediment accumulation, run-off and property changes, number of fish in the lagoons have reduced. *based on community perception

7. Dzita- Anloga/ Keta District

- **Summary:** Floods impact houses near the coastal lagoon. Rain patterns change and lagoon property have impacted fishing. Agriculture is challenged by salinity. Some water spots generated lagoon area (floodable area) between the ocean and the community.
- **Community characteristics:** The settlement follows the coast (thing and long). In 'front' of Dzita, between the ocean and the houses, there are a number of coastal lagoons with a coastal landscape and challenges similar to Goi. In the 'back' of Dzita (northern part) is located the agricultural land. Agriculture and fishing are equality important, both activities have been impacted by climate change. Salt intrusion and high temperatures have reduced the agriculture production. As for fishing, sedimentation of the lagoon and change of ecosystem properties due to sea level rise have caused reduction of fishes. In Dzita, women are responsible for agriculture and smoking (cooking) fish, and men for sea-fishing. Agriculture products are sold to Anloga-Keta District and to Azyzania community, in Ada East.

8. Whuti- Anloga/ Keta District

- **Summary:** climate change majorly impacts the sources of livelihood: agriculture and fishing. Some houses near the coastal lagoon and riverine lagoon also flood, but not all the community.
- **Community characteristics:** Whuti is one of the most developed of the targeted communities. Some roads are paved, with structure defined and buildings well finished. Similar to Agorkedzi, the settlement is in between coastal lagoons (front) and riverine lagoon (back), however the flooding impacts Whuti differently: risks the sources of income and livelihood rather than houses. Agriculture and fishing are equality important. Agriculture is responsibility of women, and is challenged by floods, drought, salinity, and temperature. Ministry of Food and Agriculture of Ghana (MOFA) have already provided agriculture trainings in the past, but the challenges persist. As for fishing, sedimentation of the lagoon and change of ecosystem properties due to sea level rise have caused reduction of fishes and fishing is now limited to sea-fishing.

9. Lagbati/Lashibi- Anloga/ Keta District

- **Summary:** climate change majorly impacts the sources of livelihood: agriculture, fishing and water conveyance. Agriculture lands make a barrier for flooding to reach the houses, however some houses near the coastal lagoon and riverine lagoon also flood, but not all the community.
- **Community characteristics:** Lagbati and Lashibi are referred by local community as one single settlement due to the spatial integration and dynamics. The settlement is quite developed compering with the other targeted communities, and it is where the Anloga-Keta District Assembly is based. Some roads are paved, with structure defined, buildings well finished, and it is possible to find urban drainage channels (properly built). Agriculture has become more important that fishing - risen temperature, accelerated sedimentation and sea level rise, has changed the properties of the lagoon, and caused the reduction of fishes. However, agriculture has been challenged by soil salinity and compactness, risen temperature, rainfall pattern changes and reduced water conveyance. Farmers started using chemicals (proven not to be efficient), which have also impacted the soil and the underground water properties.

10. Woe- Anloga/ Keta District

- **Summary:** In Woe, similar to Lagbati/Lashibi, climate change majorly impacts the sources of livelihood: agriculture, fishing, and water conveyance. Some houses near the Keta Lagoon also flood, but not all the community.

- **Community characteristics:** Most of the houses in the settlement are closer to the Keta lagoon than the ocean. Agriculture (cassava, carrots, maize, onion, tomatoes, etc.) has become the main activity due to the reduction of fish in Keta Lagoon. Population of the community leave Woe at young age and go back to spend retirement. There is an interest to process food to enlarge the source of income and avoid spoiling perishable products, especially tomato (e.g. tomato paste). Agriculture is impacted by rain pattern change, causing drought, flood, high temperature, soil compactness and salinity. Lagoon level rise also impact agriculture and houses near the lagoon.

11. Tegbi- Anloga/ Keta District

- **Summary:** In Tegbi, similar to Woe and Lagbati/Lashibi, climate change majorly impacts the sources of livelihood: agriculture, fishing, and water conveyance. Poverty impacts women, children and disabled.
- **Community characteristics**: Although the community has seen a reduction in the fishes of the lagoon, fishing is stronger than agriculture as there are two sources (sea and lagoon). Agriculture has been impacted by rainfall pattern change, floods, drought, soil salinity and compactness.

1.4 Climate exposure analysis per community

The previous information provided sufficient evidence to develop a dichotomous assessment of climate hazards exposure (Table 3 and 4) that have been continually repeating among the communities. The assessment identifies seven main hazards that are a mayor threat for the targeted communities and responds to the question: Is this a main climate hazard that hinders communities' resilience? If so, they are marked with a YES. The outputs from this assessment allowed to tailor the physical interventions to the communities' specific needs for increasing climate adaptation capacities, which are described on Annex 3 Subproject Sheets. For complementing the vulnerability assessment, information regarding the specific vulnerability groups and other cross-cutting issues can be reviewed on Annex 5.

Annex Table 3 Climate hazards per community in Cote d´Ivoire.

District	Community	Floods	Salinization	Droughts	Sea/lagoon level rise	Coastal erosion	Accelerated sedimentation	Heatwaves
Jacqueville	Tefredji	yes			yes	yes	yes	
	Tiémien			yes			yes	yes
	Attoutou B	yes		yes		yes	yes	
	Grand-Jacques	yes		yes	yes		yes	
	Koko	yes			yes		yes	
	Taboth (Ahizi)	yes	yes		yes	yes	yes	
Gran-Bassam	Vitré 2 (Ehotilé)	yes			yes		yes	yes
	Azuretti (n'zima)	yes			yes	yes	yes	
	Quartier France	yes			yes		yes	
	Mondoukou	yes			yes			yes

In Ghana, all the targeted communities are exposed to floods in urban and agricultural lands due to sea and lagoon level rise. Accelerated sedimentation is also presented in all the target areas which is linked to floods and sea level rise. Salinization and droughts are presented in more than half of the communities while heat waves are a threat to almost all communities. Coastal erosion is not a main challenge to be addressed in Ghana.

Annex Table 4 Climate hazards per community in Ghana.

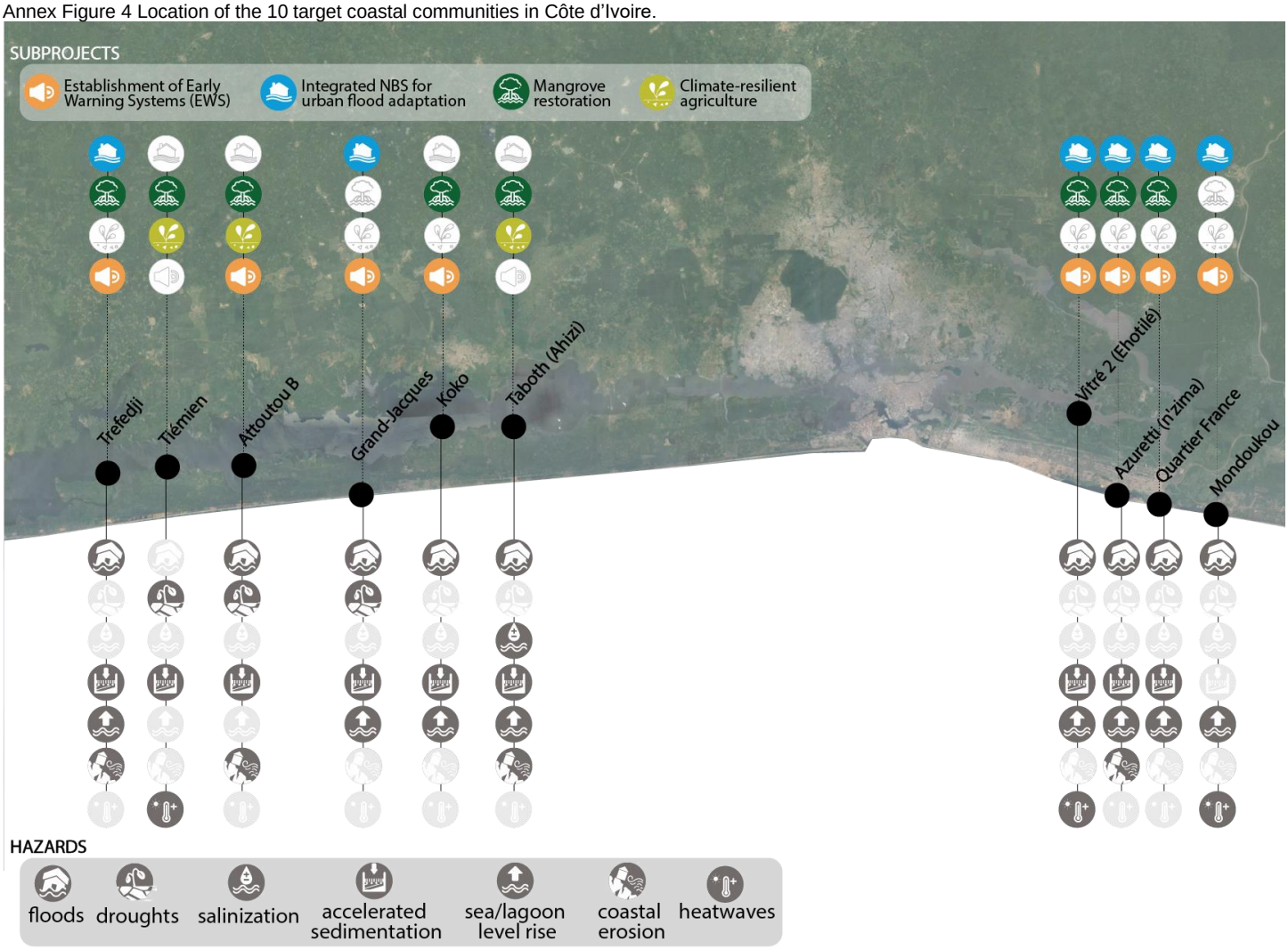
District	Community	Floods	Salinization	Droughts	Sea/lagoon level rise	Coastal erosion	Accelerated sedimentation	Heatwaves
Ada West	Akplabanya	yes			yes		yes	
	Wokumagbe	yes			yes		yes	
	Goi	yes			yes		yes	
Ada East	Kewunor/Azizanya	yes			yes		yes	
Anloga-Keta	Agorkedzi/Atiteti	yes			yes		yes	yes
	Agbledomi	yes	yes	yes	yes		yes	yes
	Dzita	yes	yes	yes	yes		yes	yes
	Whuti	yes	yes	yes	yes		yes	yes
	Lagbati/Kashibi	yes	yes	yes	yes		yes	yes
	Woe	yes	yes	yes	yes		yes	yes
	Tegbi	yes	yes	yes	yes		yes	yes

ANNEX 2: SUBPROJECT SHEETS

To **improve resilience of coastal communities** in Côte d'Ivoire and Ghana, the project works through a combination of thematic interventions, referred as sub-projects. The subprojects correspond to four main types: Establishment of Early Warning Systems (output 3.2.1), Integrated NBS for urban flood adaptation (output 3.2.2), Mangrove restoration (output 3.2.3), and Climate resilient agriculture (output 3.2.4.). The four subprojects belong to outcome 3.2 under component 3. Even though each of the four subprojects has its own logic and structure, together they pursuer climate change adaptation in and integrated manner (See Figure 12).

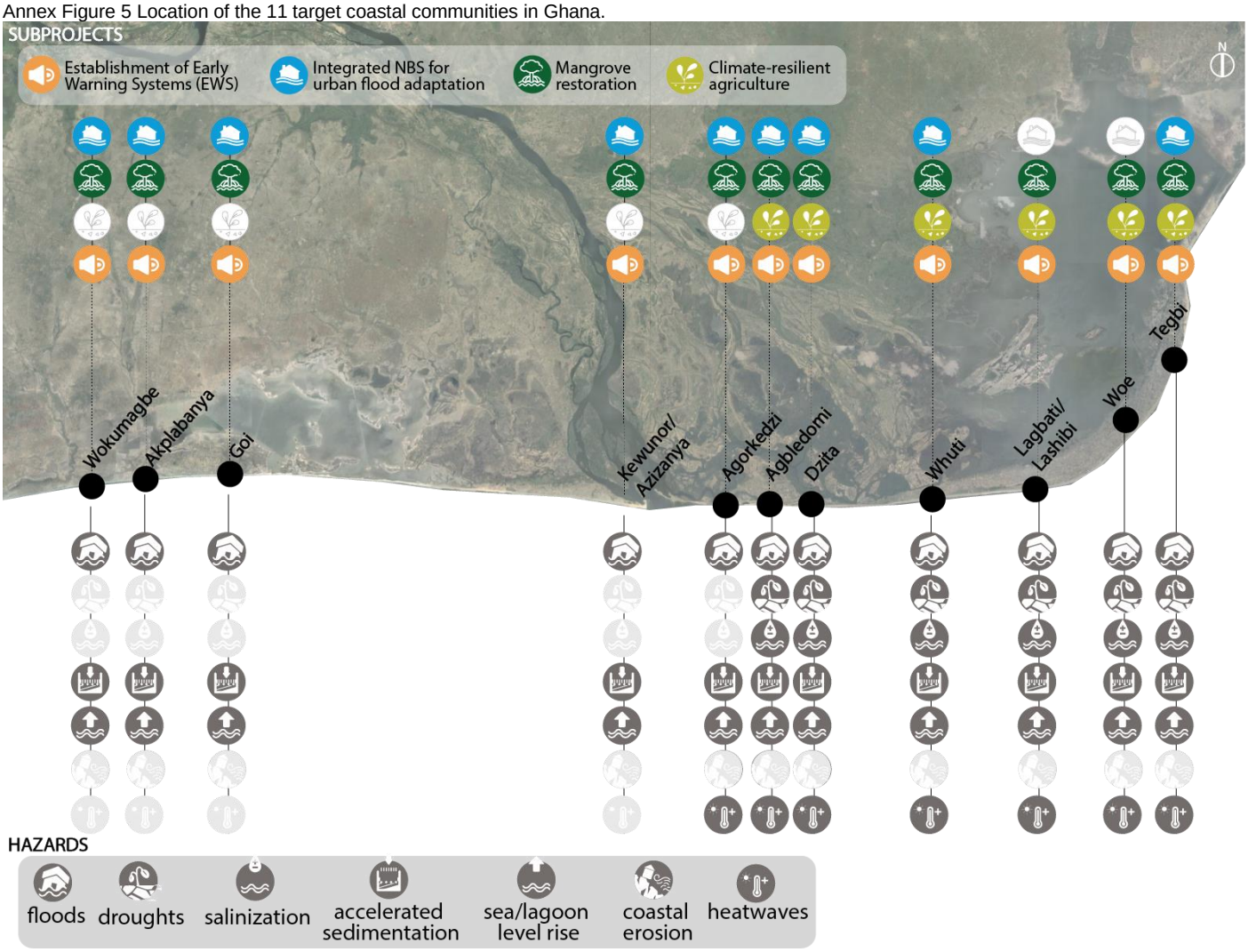
Even though the subprojects were though as an integrated response to main challenges of climate change that could be addressed at community level -so virtually work as a unique synergetic block-, they are not always implemented in all 21 communities: the local dynamics, needs and challenges identified through the analysis and consultations resulted in the identification of which interventions are needed in each community. Annex Figure 4 and Annex Figure 5 present a summary of which subprojects is being implemented in which community, in Côte d'Ivoire and Ghana respectively. In this annex, a description of the four subprojects is provided. At the end of the annex, community maps showing in detail the interventions per community are presented.

Annex Figure 4 Location of the 10 target coastal communities in Côte d'Ivoire.



Based on the fact that all communities where selected due to their exposure and vulnerability to hazards and based on the fact that no EWS is in place in the target areas, all communities will be equipped with Establishment of **Early Warning Systems (output 3.2.1),** to provide timely and effective information about floods and reduce the risk of communities. Additionally, information on hazards, risks, impacts, and early action options (climate risk preparedness) will facilitate decision making on the choice of the best adaptation and mitigation alternative practices. Supporting back all the other sub-projects and ultimately strengthening the adaptation capacity and sustainability of the livelihoods of coastal communities Côte d'Ivoire and Ghana.

Annex Figure 5 Location of the 11 target coastal communities in Ghana.

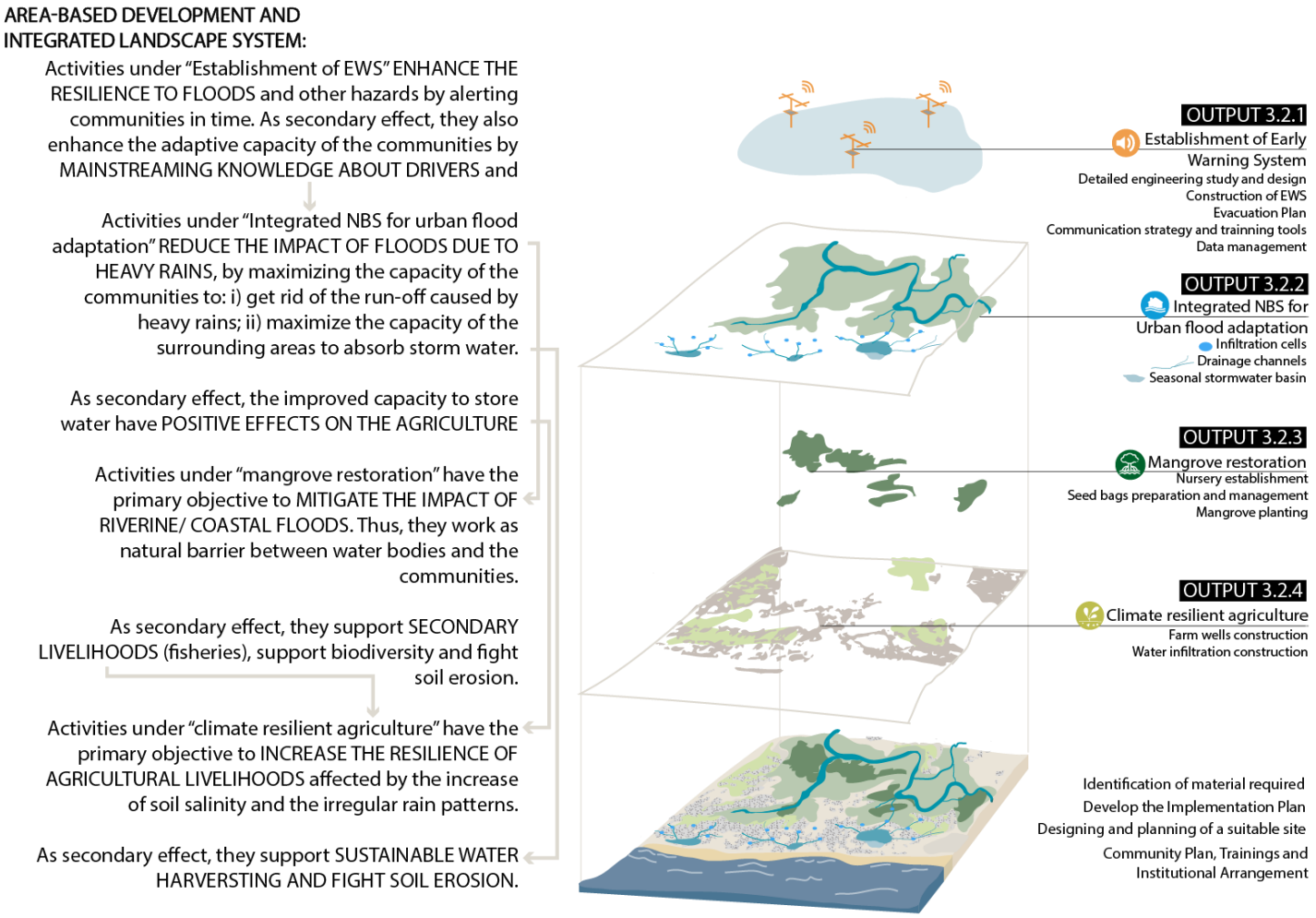


All communities are extremely exposed to floods (due to: i) heavy rains and poor drainage in the communities; ii) riverine and coastal floods) as a consequence of climate change (e.g. increased temperature, sea level, weather variability and frequency of storms, etc.). Floods cause loss of lives, damages to settlements and infrastructures, and economic losses among others. To address floods cause mainly by heavy rains and poor drainage, Integrated NBS for **Urban Flood Adaptation** will be implemented in all the communities targeted by the project (output 3.2.2).

To further support the resilience to floods and strengthen the coastal communities' capacity to resist to storms and riverine/coastal flooding, mangroves can act as a primary storm surge barrier. Communities facing deforestation and mangrove loss will be targeted with a comprehensive **Mangrove Restoration (output 3.2.3)** to recover this natural ecosystem, creating a buffer zone for flood risk to stabilize the shoreline. As a secondary effect, Mangrove restoration will also support fishery as alternative livelihoods, to better face the impacts of climate change in terms of affected economies.

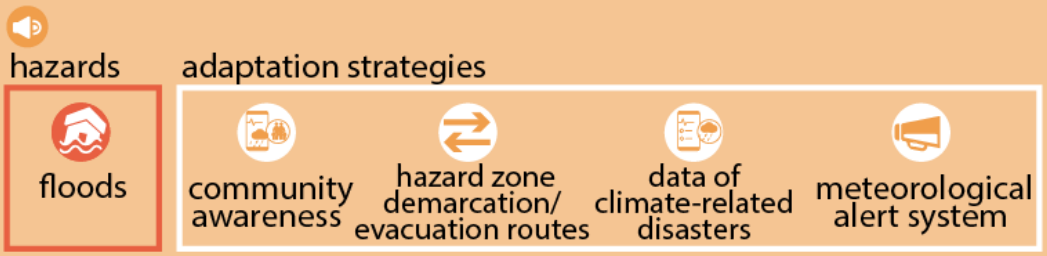
In Ghana, specifically in Anloga/ Keta, flooding resilience and mangrove restoration strategies are not enough to preserve livelihood of communities being affected by climate change. In 4 locations, extremely high salinity levels are limiting the communities' agricultural productivity and resilience. **Climate change-resilient agriculture (output 3.2.4.)** proposes an adaptation response to saltwater intrusion in underground water and to the salinity levels by promoting soil regeneration, crop-based adaptation, land and water management.

All the activities requiring physical interventions and infrastructure construction will count on detailed **engineering study and assessment** that will result in technical drawings and designs for each location. The **acquisition of materials** will prioritize local resources, such as sand, gravel and seeds.



Annex Figure 6 Diagram of the 4 integrated adaptation strategies

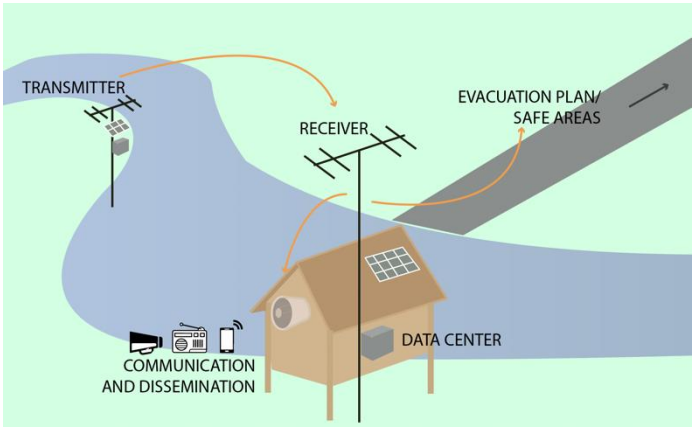
Outcome 3.2, with its four subprojects, adopts an area-based approach with a set of interventions addressing local needs will enable a tailored process considering the specific characteristics of each community and building on the local knowledge and traditions. Working on different communities at the same time by implementing the sub-project activities, gathering new lessons learned and continuously adapting to improve the results, the solutions can be transferred across the region.



Output 3.2.1: ESTABLISHMENT OF EARLY WARNING SYSTEMS (EWS)

Cost: 1,533,500 USD Beneficiaries[93]: 17,797 (direct) + 136,490 (indirect)

Adaptation strategy in brief: thanks to EWS, people will be enabled to evacuate safely and timely in case of major hazards. More specifically, the Establishment of EWS consist of: i) the installation of devices to alert the people in case of need; ii) the identification of safe areas (non-flood-prone areas in the community where people can escape during floods) and of evacuation routes to reach the safe areas; iii) training to train people about how to use the EWS, about evacuation plans.



Annex Figure 7 EWS

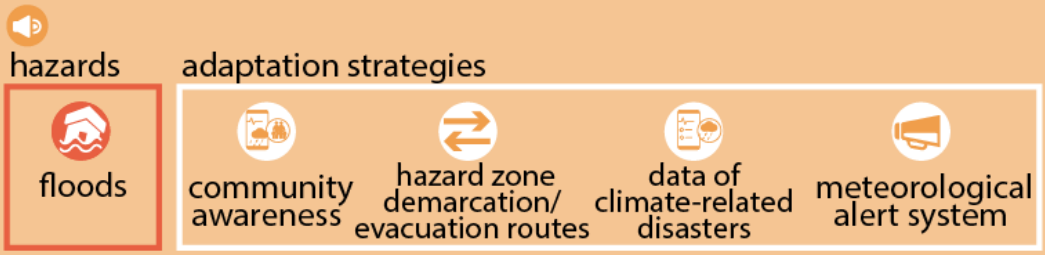
SUBPROJECT DESCRIPTION

Due to the climate change, rainfall increases causing rivers and lagoons to overtop their banks, leading to flooding, and has already led to major damages to houses, assets and infrastructures and devastate critical ecosystems such as mangroves, beaches, and farmlands. The climate change, which triggers sea-level rise and extreme rain events, increases frequency and severity of coastal and riverine floods. EWS is a critical component of disaster risk reduction (DRR) efforts. Reliable disaster early warning is vital to disaster response. The system aims to monitoring disasters, forecasting of a probable event, and notify and warn with clear messages, with dissemination system that reach those at risk. It is also serves as the trigger point of evacuation order and timely response initiation decision by individuals and local governments, resulting in saving lives and property. The mutual collaboration and learning process build on the public preparedness and reaction capacity of target communities and decrease vulnerability.

Early Warning is “the provision of timely and effective information, through identified institutions, that allows individuals exposed to hazard to take action to avoid or reduce their risk and prepare for effective response”. Such systems are usually made up of a network of sensing devices, such as satellites or radar, for detecting extreme hydrometeorological events in time to take preventive actions in order to mower their impact and put together an effective and efficient dissemination of timely hazardous events and risk information to the public, comprising an early action and earlier response, minimizing damage and losses.

The importance and need to promote, invest in, develop, maintain, and strengthen EWS as one of the key elements of disaster risk reduction is mentioned in upstream documents such as the Sendai Framework and the Hyogo. Setting up an early warning system (EWS) will allow municipalities and local communities have timely climate information which will enable them to rapidly take action and better plan prevention and adaptation measures in relation to climate risks.

93 **Beneficiaries calculation**: direct + indirect. Direct (targeted with high intensity): trained people and community member involved on developing the evacuation plans and identification of safe routes (estimation of 20% of the population). Indirect (i. targeted with medium intensity + ii. not targeted with medium intensity): i. all population in the 19 communities where the project is implemented; ii. all population in the communities next to the 19 targeted communities (if the evacuation plan includes these areas).



Such improved adaptive responses against climate shocks will support the provision of impact-based forecasting. “End-to-end warning system” is a term used to emphasize that warning system needs to span all steps from hazards detection to community response. Inadequate climate information services and early warning systems impacts the capacity of local communities in taking adaptive responses to climate change. Accurate, reliable, and timely climate information coupled with robust early warning systems are crucial for planning adaptive measures to reduce losses and damages resulting from climate-related extreme weather events and from other risks and also facilitates early recovery effectively.

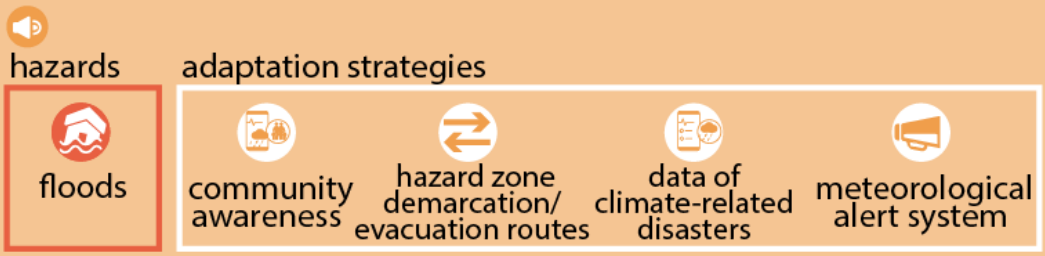
IMPLEMENTATION STRATEGY AND PLANNED ACTIVITIES

Preparation

- Detailed engineering study to set up the EWS:

(i) Analysis of the existing informal systems in place and available hydrometeorological data, assessment of EWS regulations and standards at country and local level,
(ii) Detail flood risk screening based on available data in order to confirm the sites to be monitored (gage stations, water level in ponds, retention areas…),
(iii) Definition of the necessary meteorological (radar, rainfall stations, meteorological stations…) and hydro (gage stations, water level monitoring…) equipment to be installed
(iv) Participatory mapping and detail identification of the evacuation centre and routes in concerned communities,
(v) Identification of the needs in terms of equipment (a transmitter and a receiver), including IT, capacity building and institutional strengthening,
The study will have to be validated by the local stakeholders, including focal points of the National government, city technicians and officials as well as community leaders.

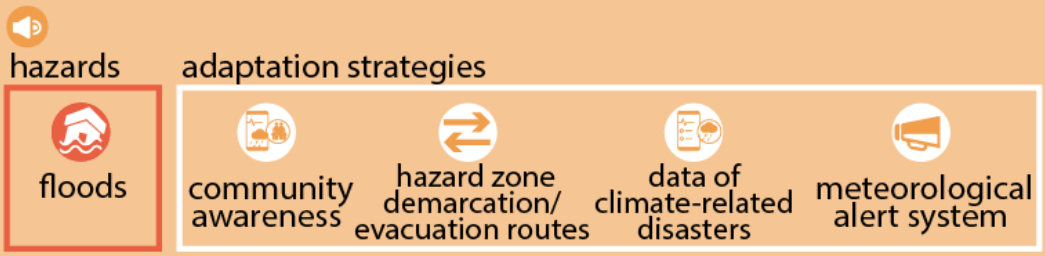
- Preparation of tender documents for purchase and installation of hydrometeorological equipment, including warning messages disseminations kit (beacons, flags, sirens, signalling, speakers, etc.), and capacity building,
- Assistance in the reception, the follow-up of the installation and the test of the equipment.
- An improved local communication mechanism for EWS will be stablished, ensuring that early warning messages are effectively communicated and understood by the local population, enabling people and communities receive warning in advance to proper flooding events preparedness, facilitating coordination among districts and information exchange. It is necessary to ensure information is shared in a manner that is timely and “actionable” and also to integrate people, processes, and technologies to drive optimal benefits in weather forecast and use. A chain of multi-layered communications will be set up to maximize the reach. Part and parcel of the overall implementation strategy will hence be to make maximum use of youths and women in disseminating weather-related forecasts. The proposed project will involve youth groups and local disasters volunteers in the communication strategy, trainings and drills for the EWS. Additionally, local radio stations at community level identified during the consultation process will be involved sending alert. Radio messages can be reinforced by a system of automated sirens, as well as through the use of megaphones by responsible/trained members of the local community. Importantly, marginalized and vulnerable groups need to be targeted so that early warning messages can reach them soon and they can be safely evacuated before the occurrence of an imminent flood.



In Ghana, the institutions to be engage in the process are the Hydrological Services Department (HSD), Ghana Metrological Agency (GMet), Water Resources Commission (WRC) and National Disaster Management Organisation (NADMO), specifically the Emergency Operations Center (EOC).
In Côte d'Ivoire, the institutions to be engage in the process are authorities in charge of DRR.

Operation

- Early Warning System construction: The NGO will provide training and support the development of institutional arrangements inside the communities for the installation and operation systems. Additionally, technical expertise has been secured from development partners.
- In parallel, the communication and dissemination strategy will ensure communities receive warnings in advance of impending flooding events, involving clear messages with simple, useful and usable information to enable proper preparedness and response that will help safeguard lives and livelihoods.
- A community emergency response team will be created to train civilians to be the first responders to their own local disasters, this will make the disaster management more effective and safer for local communities. These "local disasters volunteers" will be involved and activated during a disaster to assist the communities and guide neighbors to reach safe places. The aim of this team is to provide a rapid, effective, and efficient emergency response in times of disasters.
- After the EWS in place, based on available information and priorities, the second step will determine the preparedness and response measures to be implemented when a disaster occurs. Early warning system will be an efficient measure, knowing the timing between the moment of the rainfall upstream and the critical rising water levels de downstream. The NGO will train and equip EWS operators in charge of the equipment and train the community emergency response team in order to identify the suitable disaster response when a disaster occurs.
- Reliable and redundant communication system is essential for the effective dissemination of early warning information. A EWS Central Data Management will be created to collect all the data generated and to disseminate effectively and rapidly. The system connects to agencies and local governments via internet and provides detailed weather information and warnings to local communities and municipalities. Information for citizens will be transmitted via local radios, mobile messages and specific communication mechanisms based on the local context of each community. L-Alert is a disaster information sharing system where prefectures use a shared platform for sending out local disaster information via multiple media, such as mobile SMS, email, radio, tv, digital boards, loudspeakers and community-managed bulletins.
- An evacuation plan will be prepared through participatory approach with the concerned communities, identifying evacuation centers and mark escape routes and improve evacuation routes from disaster prone areas to evacuation centers. The evacuation plan needs to be properly marked and well signaled so they can be easily identified and used during a flood emergency. This activity needs to be led by the communities themselves in coordination with the responsible authorities, to increase the level of awareness and understanding.



- Provide recommendation of relevant national, regional and local rules, regulations, standards and procedures/lessons learned.

Monitoring and maintenance

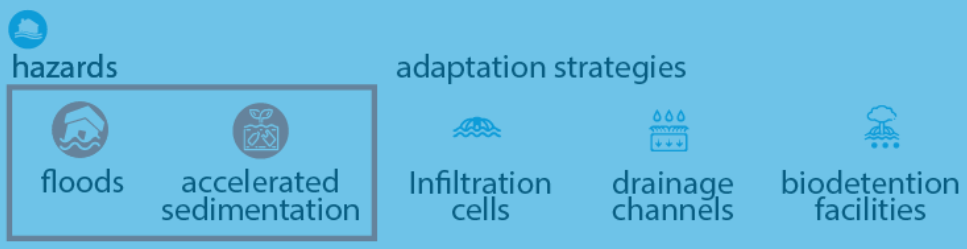
- The subproject will ably collect weather related information generating data, which will support risk management decisions relying on accurate information and necessary data for drought adaptation. Il will enable to provide useful data not only for preparedness and crisis management but also for scientific studies aiming at understanding better the hydrometeorological phenomenon (calibration of hydrological model, provision of input data to regional climate models…).
- Enhanced communication mechanisms need to be established between the local communities and the responsible institutions at the different levels: municipal, district and regional. At different levels, the subproject will review and provide recommendation of relevant national, regional and local rules, regulations, standards and procedures.
- Communities must be aware of the warning messages and know how to react to them. Training and awareness-raising activities such as regular drills, validation workshop and training sessions will be delivered at the community level regarding disaster risk prevention, preparedness and response.
- Field monitoring: technical visit on regular basis to inspect the flooding areas and assess if the evacuation centre and routes are well developed and the results to the community.

INNOVATION

Innovation will be achieved by implementing a comprehensive system using local knowledge and involving different stakeholders to the process, formalizing and coordination of early warning mechanisms among various organisms and local community.

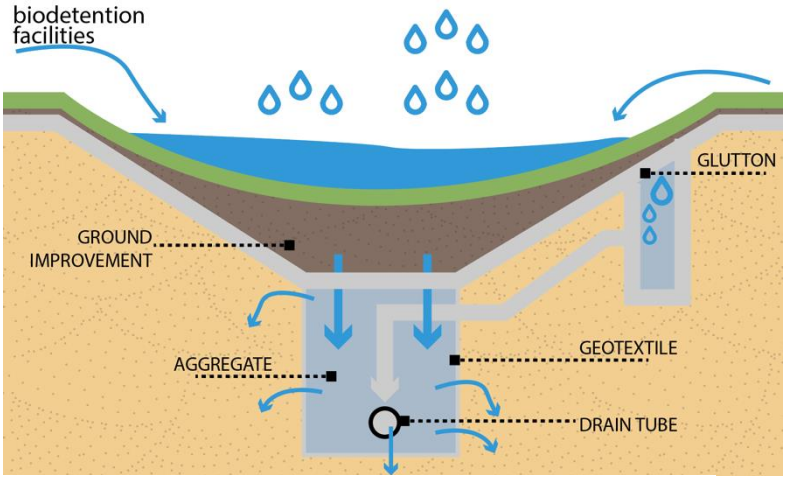
Generate good risk management decisions rely on accurate information and data.

Local Disasters Volunteers will be created, trained and involved in the communication strategy.



Output 3.2.2. INTEGRATED NBS FOR URBAN FLOOD ADAPTATION

Cost: 1,464,522 USD Beneficiaries[94]: 18,937(direct) + 33,589 (indirect)



Annex Figure 8 Integrated NBS for urban flood adaptation

Adaptation strategy in brief: thanks to the integrated NBS for urban flood adaptation, water will run off the settlement quickly in case of heavy rain, thanks to reinforced drainage channels, and the capacity to absorb the run-off of the surrounding areas will be maximized, thanks to the creation of bioretention facilities. More specifically, at present the communities have drainage channels, but the network is poor, channels are too narrow and only dig: with the rain they get obstructed by their own mud. Hence, key drainage channels will be identified in each communities: such channels will be enlarged and reinforced with sand and gravels. Where small lagoons are present, the drainage system will be discharging the rain into the lagoon, but biofilters will be introduced to increase the water quality of the (already degraded) lagoons. To conclude, bioretention facilities (infiltration cells) will be built in the communities to absorb and store water from the floods. All measures proposed in this output are nature-based solutions.

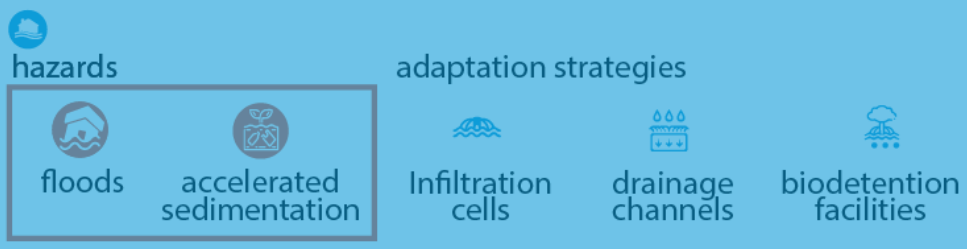
SUBPROJECT DESCRIPTION

To reduce impacts of climate change, this project will integrate nature-based solutions that mitigate surface run off and flooding, which will be resource-efficient and adaptative, reducing the costs in the short and longer-term (construction and maintenance) and more resilient.

Strategies include **bioretention facilities** in Ghana and Côte d'Ivoire, through vegetated **infiltration cells in specific sites** (e.g. rain gardens) **and drainage channels** (e.g. bioswale) connected to one another and to a lagoon, facilitating the absorption and purification of water by the soil**.** Additionally, **seasonal biodetention facilities** will be built in specific communities in Ghana that face inundations around lagoons located among the houses, in the centre of the settlements, as a consequence of the rise of the level of water after extreme events. As part of the settlement landscape and connected to the lagoons, the seasonal detention basins will enable recreation uses during the dry period.

Although the communities share the same general challenges and assets, each intervention site have a unique combination of characteristics, social dynamic, ecosystem, morphology, etc. Hence, appropriate adaptation of technologies and activities will be identified in the initial phase of the project, combining the traditional techniques to the designs.

[94] **Beneficiaries calculation: direct + indirect.** Direct (targeted with high intensity): people living next to the interventions (assumption: 40% of the population). Indirect (i. targeted with medium intensity + ii. not targeted with medium intensity): i. all population in the 15 communities where the project is implemented; ii. zero.



IMPLEMENTATION STRATEGY AND PLANNED ACTIVITIES

Preparation

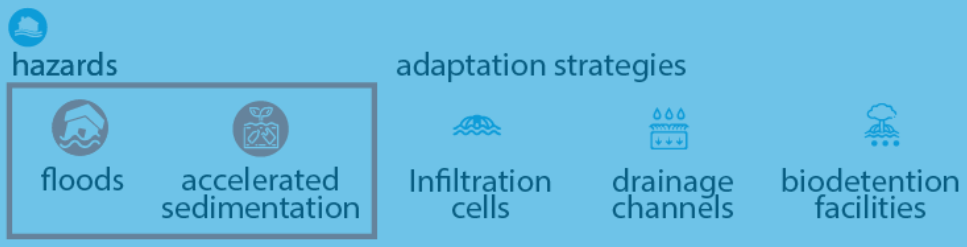
- Develop a **detailed engineering study**, including **soil** types and characterises, **hydrology** and **water pollution** (*E.Coli*, organic pollution, plastic and heavy metals). In addition, topography and flooding analysis will be correlated with the socio-economic activities to identify main vulnerable hotspots and opportunities for the community to profit of the strategies beyond erosion resilience (Component 3).
- **Project and coordination set-up**, including setting the project office (different communities can have the same office, according to their regionality), hiring staff and structuring the roles. Additionally, an **implementation plan** should be developed containing the detailed steps, workplan, definition of roles to supervise and coordinate the activity (Component 2). As part of the Implementation plan, a Community Plan with programmed trainings, local engagement activity and identification of relevant representations will be developed. NGO's with relevant experience and previous projects in water quality, drainage, and erosion in the same region will support the component (Component 2).
- Organize **participatory workshops** with community and local stakeholders to **validate results** of the diagnosis, including the challenges and opportunities. Partner NGO will deliver **trainings** on the project activities and technical details of each step of the implementation. As part of the capacity building and awareness raising, **bioretention measures** piloted with involvement of community.
- Develop detailed **constructive drawings**, including the specific location of each facility, the materials needs, the depth of each intervention and an analysis of how it will impact the community.

Operation

- **Acquisition of material** for the construction of the bioretention and detention systems (in addition to sand, gravel, wood and vegetation, construction tools such as shovel).
- Construction of **bioretention and detention facilities** listed below, according to the context of the site. They be shortlisted according to the diagnostic, or complemented with traditional knowledge and techniques:
  - **Infiltration cells** in flooding hotspots near settlements to promote infiltration when extreme events occur. Gardens can be integrated to small farming activities
  - **Drainage channels** connected with waterbody to support the infiltration along the catchment area, also filtering water and guarantying quality and conveyance
  - **Seasonal biodetention basins** (natural lower-level topography) next and connected to the lagoon to catch the water that overpasses the lagoon capacity. During the dry period the site can be used for recreational purposes.

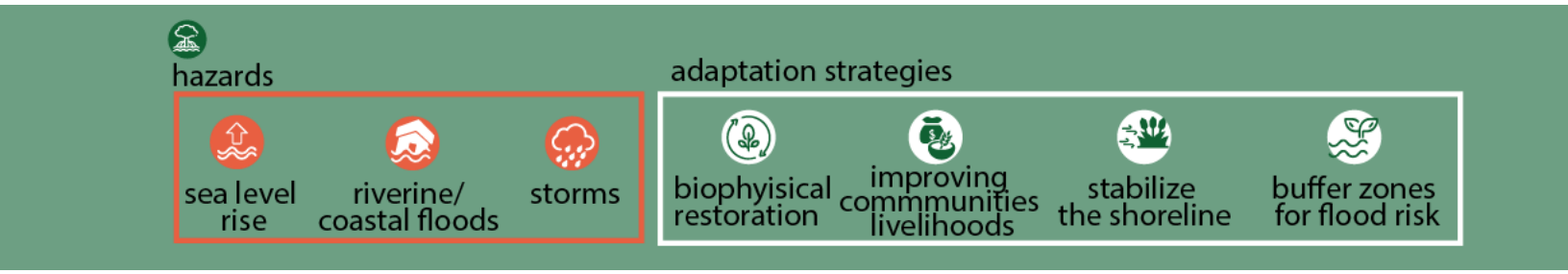
Monitoring and maintenance

- **Trainings and awareness** raising (Component 3) to promote maintenance of systems (and prevent mowing), when and how to use the retention basin during dry season and how to profit from the vegetation planted. This activity include the preparation of materials to be distributed in the communities (ensure inclusion) and training workshops.
- **Field monitoring** during the project duration by the NGO in collaboration with the local community. Monitoring will be done through technical visit, water quality monitoring, identification of number and intensity of water erosion and if channels are adequately vegetated. A **report** will be developed to monitor the status of the facilities (well-functioning, efficiency) and the results to the community.
- **Maintenance** will be done through repairing structure of the facilities and replanting of more resilient vegetation after every major rain event.



INNOVATION

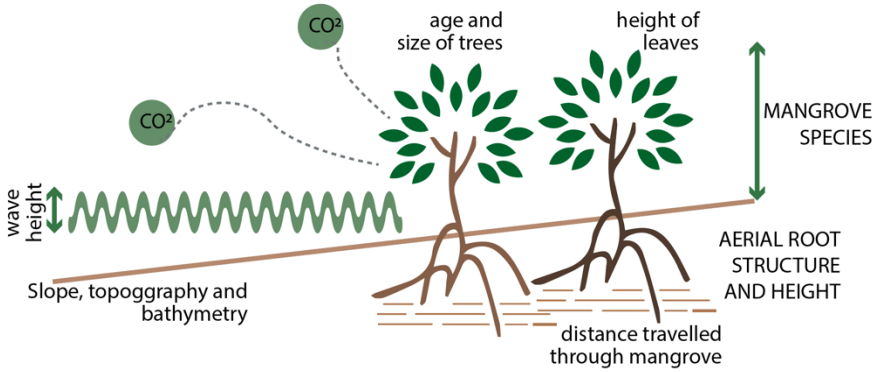
Nature-based solutions (also called by green infrastructure and low impact engineered), although widely studied and discussed, concentrates implemented and pilot projects in developed countries. In Ghana and in Côte d'Ivoire, the Urban Flood Resilience sub-project is innovative because it creates real change from the resources and capacity already in place (including traditional knowledge). The potential to propose engagement and community ownership of water management systems is powerful in this vulnerable context. Linked to the knowledge development and the regional exchange of experiences and lessons learned (component 1), the project will create a new opportunity for climate and flooding resilience in these coastal communities.



Output 3.2.3. MANGROVE RESTORATION

Cost:1,785,339USD *Beneficiaries[95]: 85,584(direct) + 52,763 (indirect)*

Adaptation strategy in brief: mangroves can act as barriers that mitigate floods and storms. For this reason, mangroves are being restored in the buffers between possible source of riverine/coastal floods and the communities. More specifically, the restoration will adopt native species (black, white, red and button mangroves) and cover 582 hectares. There will be two nurseries (one per Country), but no need to build them: the project will take advantage from existing infrastructures. Carbon credits will be introduced to make the subproject more sustainable.



Annex Figure 9 Mangrove restoration

On top of direct advantages in terms of flood mitigation, restored mangroves will also boost the natural systems, provide fisheries (which also represent an alternative livelihood) and mitigate soil erosion.

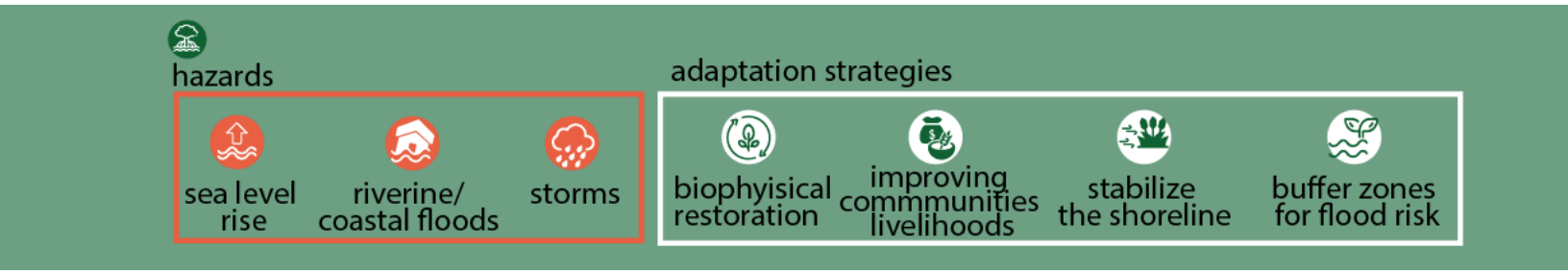
SUBPROJECT DESCRIPTION

In the **Volta estuary in the Keta region, Ghana**, communities are on a narrow land strip between the sea and the Keta Lagoon. Climate change, including weather extremes and sea-level rise, impacts the coastal region, where mangroves can function as a primary storm surge barrier. Rising sea levels, erosion from extreme weather and increased storm surge represent a significant and growing threat to mangroves related to climate change. Rapid population growth, over-reliance of wood as fuel and agricultural expansion also represents main threats. The degraded mangroves have affected livelihoods and reduced the water systems´ benefits for coastal protection, flood buffering, and stabilizing substrates composed of fine sediments, among other ecological benefits. Additionally, very high salinity levels limit agricultural productivity in Anloga/ Keta.

In **Cote d'Ivoire**, climate change, urban development and harvesting for fuel are the main reason why the overall number of mangroves in Côte d'Ivoire has dropped from 20,000 hectares in 1990 to 10,000 hectares in 2020. Climate change reasons relate mostly to increased salinity levels, accelerating sea level rise and increased number and increased extreme weather events. This has damaged the coastal lagoon's ecosystems, reduced lagoon's productivity, and increased flood risk, water pollution, and shoreline erosion. This, as part of a vicious circle, makes the region more susceptible to climate change as sea level rises and weather extremes become severer. Estimates indicate that 60 percent of the mangroves have been lost around Abidjan.

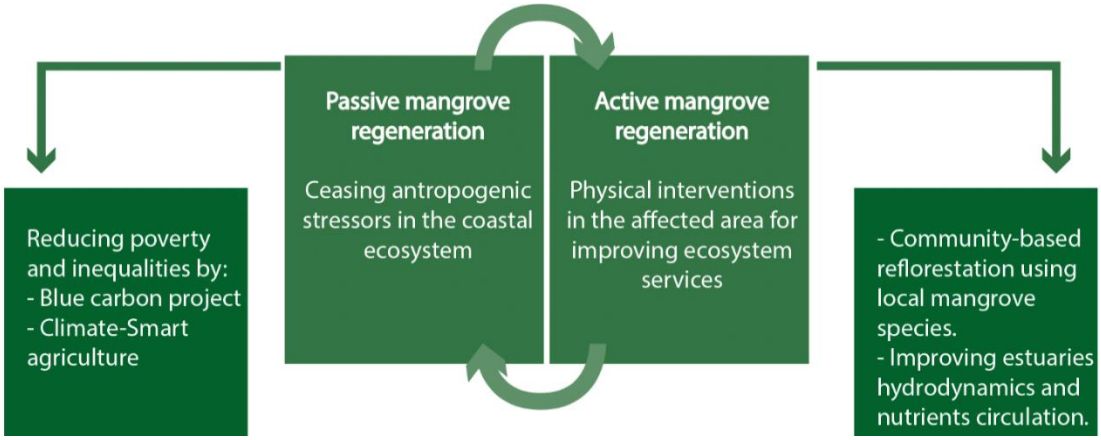
Mangrove restoration

[95] **Beneficiaries calculation: direct + indirect.** Direct (targeted with high intensity): all the population in each of the 18 communities. Indirect (i. targeted with medium intensity + ii. not targeted with medium intensity): i. zero; ii. all population in the communities next to the 18 targeted.



In order to attend mangrove depletion and reduce climate vulnerability to sea-level rise, flooding and erosion, under Component 3 (Concrete transformative ecosystem/ natural resource adaptation interventions at sub-regional and district level), a comprehensive strategy will be developed by integrating passive and active restoration. Passive restoration is directly linked to addressing anthropogenic causes of mangrove loss and improving communities' livelihoods. Active restoration will guarantee biophysical restoration in areas that have been ecologically disrupted. This intervention aims to **stabilize the shoreline**, creating **buffer zones for flood risk/ inundation reduction**, and **securing/ increasing livelihood opportunities more in-land** (as pull factor from the shore) as well as the **protection of exposed assets for the most vulnerable communities**.

Annex Figure 10 Passive and active mangrove regeneration



Active mangrove restoration

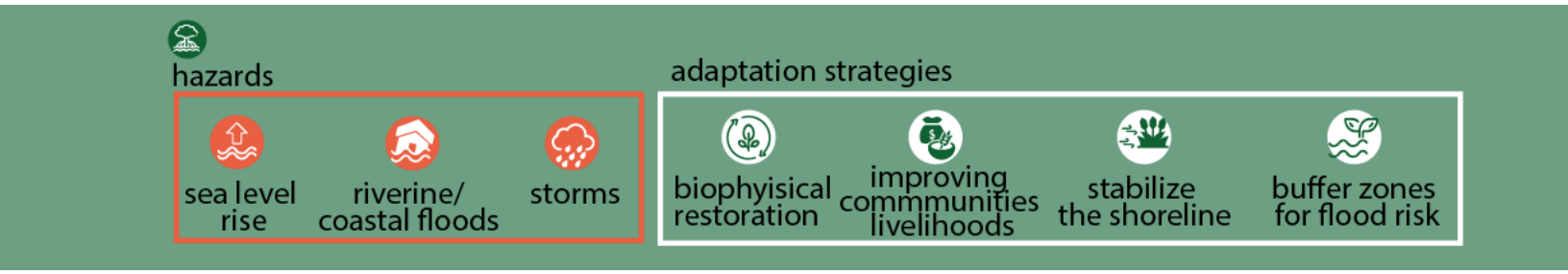
The Sub-Project implementation plan projects to plant **410 ha** of mangrove in Ghana and **172 ha** in Côte d'Ivoire, with a total of **582 ha of restored mangrove**. This **community-based** strategy aims to build resilience, aiming to leverage the existing natural environment and its ecosystem services as a tool to adapt to climate change and restore natural dynamics. In some locations, mangroves have been able to keep pace with sea level rise, highlighting the adaptive characteristic of this intervention.

Annex Table 5 Mangrove restoration per community in Ghana.

Districts in Ghana	Community	Mangrove restoration (Ha)
Ada West	Akplabanya	21
	Wokumagbe	42
	Goi	49
Ada East	Kewunor/Azizanya	28
Anloga-Keta	Agorkedzi/Atiteti	38
	Agbledomi	32
	Dzita	22
	Whuti	40
	Lagbati/Lashibi	40
	Woe	48
	Tegbi	50
Total		**410**

Annex Table 6 Mangrove restoration per community in Côte d' Ivoire.

Districts in Cote d´ Ivore	Community	Mangrove restoration (Ha)
Jacqueville	Tefredji	6
	Tiémien	**15**
	Attoutou B	17
	Koko	10
	Taboth (Ahizi)	10
Grand- Bassam	Vitré 2 (Ehotilé)	25
	Azuretti (n'zima)	30
	Quartier France	59
Total		**172**



Mangrove forest active restoration will be performed by analysing the hydrodynamics, vegetal biodiversity, and general conditions of the ecosystem. Improving the physical hydrological conditions can return the balance of nutrients and water cycle in the estuaries. Once this has been resolved, involved stakeholders can proceed to plant local seedlings in the targeted areas. Table 7 presents the vegetation species that will be planted according to the local habitat which are suitable for replanting; their capabilities to trap sediment will raise the land that improves protection against higher water levels associated with climate change. There are no pollution threats to the growth of mangroves in the targeted communities. The activities have been designed to minimise potential risks by selecting numerous, small scale and very localised interventions, proposed, and managed by the communities themselves (where possible) who have a stake in avoiding environmental and social impacts.

Annex Table 7 Vegetation to be planted in reforested areas by region.

Mangrove Species	Common name	Region and Country
Rhizophora mangle	Red mangrove	Ghana
Rhizophora racemosa		Ghana and Cote d'Ivoire
Laguncularia racemosa	White mangrove	
Avecinnia germinans	Black mangrove	
Conocarpus erectus	Button mangrove	

Landowners, private or public, have agreed with using their land for project activities and agreement with the Chiefs and Elders for use of their lands have been signed. The land status of this area is public and currently is used for fishing and fuelwood provision.

Passive restoration

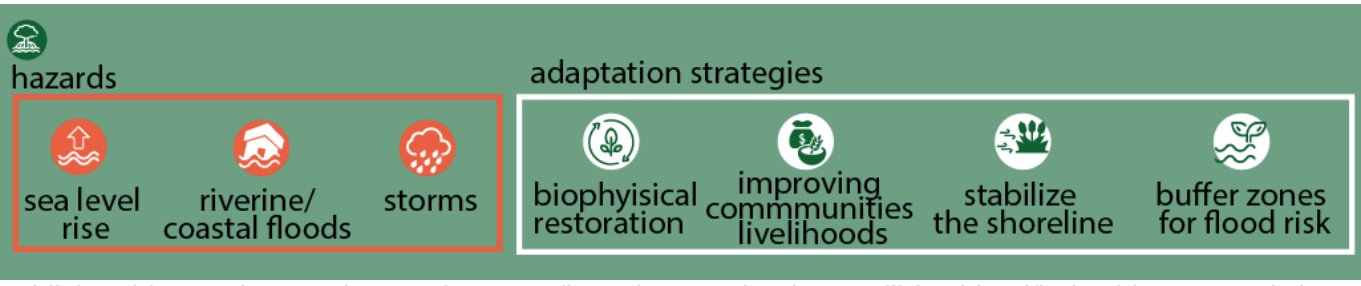
Deforestation primary causes are mangrove provision services (for market and self-consumption) and low livelihood diversification in the region. It is also known that livelihoods and economic benefits are the main factors of community participation for mangrove conservation. Therefore, by enforcing passive restoration, focused on addressing the origins of deforestation, mangrove forest will be protected, and livelihoods will be improved and diversified.

Two strategies will be developed for this purpose: **Climate-resilient agriculture practices**, which are described in a separate subproject in this section and the Blue Carbon Project. The **Blue Carbon Project (BCP)** objective is to take advantage of the 582-ha reforested mangrove capacity to sequestrate $CO^2$96, which can be accounted and transformed into carbon offsets in order to compensate greenhouses gases emissions through the Carbon Offset Market. Once carbon offsets are purchased, communities are economically benefited receiving revenues from the mangrove ecosystem service delivered. This response to the necessity of improving communities' livelihoods, empowering them while guaranteeing the sustainability, regeneration, and conservation of the mangrove forest. In order to register the reforested areas as a certified blue carbon project, different steps will have to be followed, such as the development of a concept note, the execution of technical studies (carbon inventory), the development of a project design report by a NGO and the verification of the project by a third party for further registration as a certified BCP, as reflected in the project budget.

INNOVATION

Innovation will be achieved by implementing a comprehensive ecosystem restoration intervention, using both active and passive strategies. Passive restoration includes the implementation of a Blue Carbon Project, which is supported by the Blue Carbon Financing of Mangrove Conservation in the Abidjan Convention Region: A Feasibility Study by the Abidjan Convention-An executing entity of the project will

[96] For reviewing carbon sequestration capacity of the project, please find document here



establish a blue carbon project and proper financing mechanisms will be identified. This approach is innovative in the Western Africa region, and it highlights due to its implementation in two different countries who share ecosystem service benefits to the region. The CREMA mechanism is also consistent with the current ideas on socio-ecological landscapes. It therefore seeks to achieve; conservation of the bio-physical, socio-cultural development and livelihoods supports/economic development for a community area.

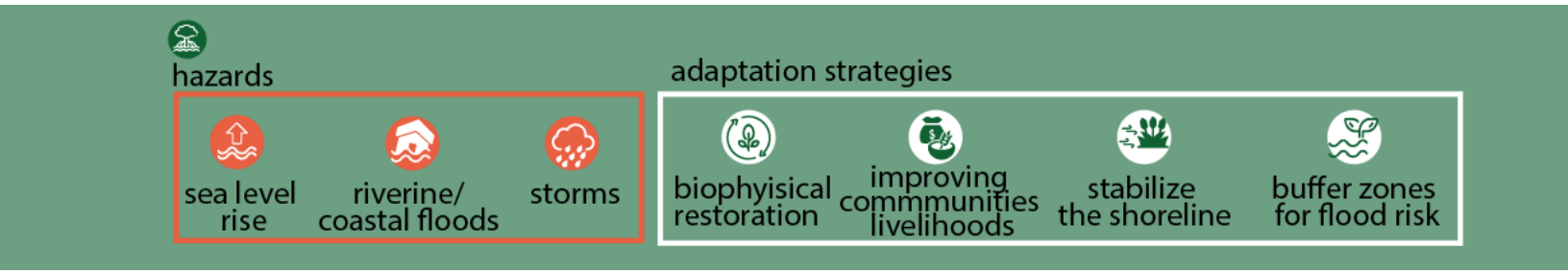
IMPLEMENTATION STRATEGY AND PLANNED ACTIVITIES

Preparation

- Detailed engineering study and design for **active restoration**: Detailed design and programming of the intervention will be done by the Executing Entity (site evaluation, seeds survey, final zoning etc.). This will also include further detailed information/data on technical elements such as hydrogeology (Water dynamics, tides movement) and soil characteristics (chemical and biological parameters). This activity with the support of the community plans under component 2, will result in the intervention Implementation Plan.
- Buying materials: Tools (Mattock, Wellington boots, Cutlasses); Mangrove seedlings, manual/fertilizers (organic), Mangrove Nursery (wooden planks, thatch, racks).
- Establishing the nursery in Lagbati/Lashibi (Ghana) and Quartier France (CDI): Proceed to the site leasing, fencing of the site and construction of small built infrastructure for storing and operationalization.
- **For passive restoration:** Blue carbon offset initial technical studies (carbon inventory which will be developed following accepted methodologies for carbon sequestration capacity of mangrove ecosystems), development of project concept note, and project design report developed by a NGOs.
- Blue carbon project must be validated by a third party, including report review.
- Blue carbon project certification and registration by a certified international standard for carbon offset credits issuance.

Operation

- Nursery management: collection of soil to site and transport to the nursery, as well as bed and bag preparation. Daily activities include watering, shading, weeding, hardening, grading, sorting, packaging seedlings, etc.
- Plant mangroves: as seedlings are ready on the nursery site, the plating will take place including clearing of planting sites. Planting process will be approached as a community-based mangrove restoration. This will be led by the project manager, coordinated on site by a supervisor, and executed by local community hired for this intervention. Community participation as volunteer for planning the mangrove will be fostered.
- Transportation: transportation of the seedlings from the nursery to the site will be sub-contracted and managed by the project lead.
- An implementation plan will be put in place to supervise and coordinate the activity (component 2) as part of the community plan, in which the different stakeholders are provided with training and assigned roles, benefits, and responsibilities.
- Management: to implement the intervention an office will be set up with time allocated from experts and a project manager. Implementation will be based on the Implementation Plan under the preparation phase.
- A team of well-trained and dedicated experts and an NGO with previous and relevant experience in the development of mangrove restoration programmes (organizations have been pre-identified

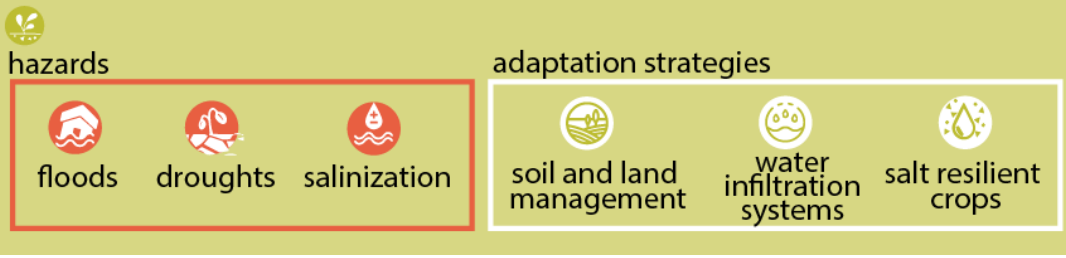


for competitive procurement and will lead the project execution, and community members will replant after they have received training.

- The NGO in collaboration with the municipality and communities will establish a centre for the training and value chain of the mangroves, based on a model replicated from previous projects on mangrove restoration.

Monitoring and maintenance

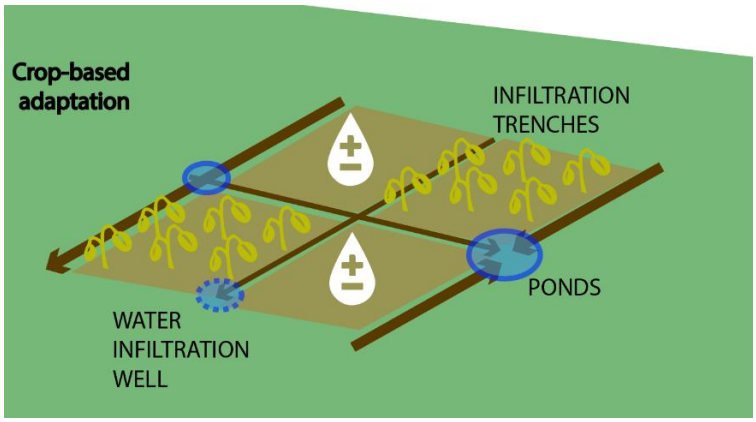
- Field monitoring: visit the plantation on regular basis (daily, weekly, monthly, quarterly) to inspect the entire plantation and specific patches, look out and/or check for encrusting organism, etc. Drone flying to support evaluate seedlings performance.
- Awareness raising through component 2.
- Extra seeds: based on the experience of the implementing partner, extra seeds will be included to address potential failures on the first replanting exercise.
- Maintenance and sustainability will be ensured through the Community Resource Management Areas (CREMA) mechanism. This is a governance arrangement for natural resource management.
- Raising awareness and capacity building (component 2)
- Resources and livelihoods management plan to be developed (component 2).
- A monitoring plan to be developed (component 2) which includes replanting areas that have not succeed on the first round.
- Community Resource Management Areas (CREMA) By-laws enacted by the district assembly for the protection of mangrove which will impose measures such as fines etc. (C1 or C2).
- Periodical carbon audits performed by an external entity and annual reports of carbon credits issuance and operational activities are developed.



Output 3.2.4. CLIMATE-RESILIENT AGRICULTURE

Cost: 2,588,414 USD *Total beneficiaries[97]: 2,160 (direct) + 1.080 (indirect)*

Adaptation strategy in brief: salinization and rain pattern variability are threatening traditional peri-urban agriculture. To increase the resilience of agricultural practices and ensure key livelihoods in the communities, this output focuses on transferring knowledge and tools to: i) improving soil´s fertility (using agroecological techniques and other soil management solutions), ii) introducing salt-resilient crops, iii) promoting agriculture water management improvement, and iv) improving agricultural land management. More specifically, a pilot plot will be identified in each community hosting this subproject. A community group will be trained to these new techniques and supported to transfer them in their plots, though the provisioning of crops and guidelines and trainings to effectively manage water, soil fertility, and land in general.



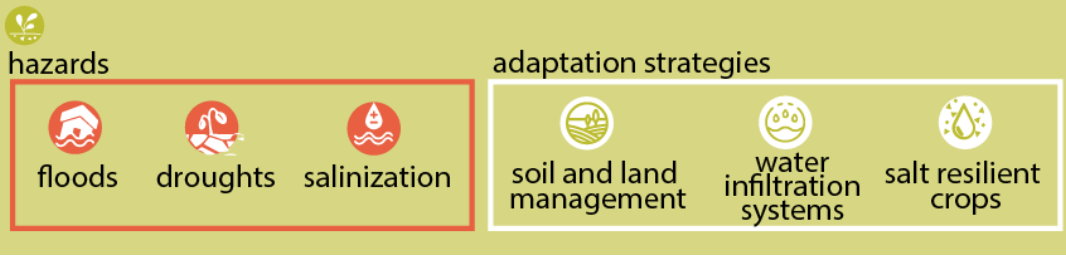
Annex Figure 11 Climate resilient agriculture

SUBPROJECT DESCRIPTION

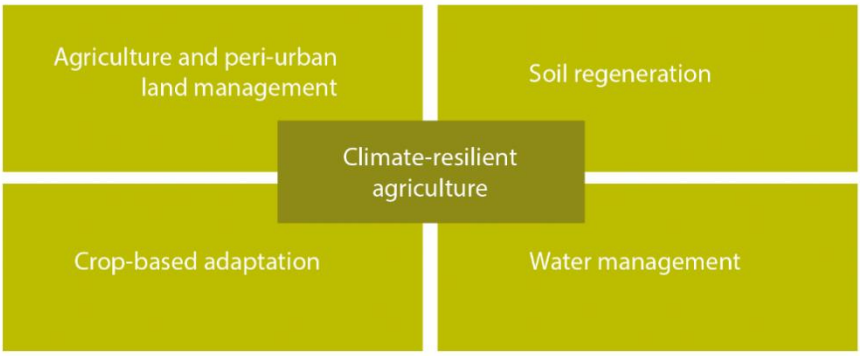
The Keta and Volta communities are located in a low-lying coastal plain with the highest point of 53 meters above sea level and the lowest between 1 to 3.5 meters below sea level. Some areas are experiencing annual increase in flooding and present extremely high salinity levels, limiting communities' agricultural productivity and local agri-food resilience. Ecosystem services play a key role in livelihood creation, and communities in these districts highly rely on their natural environment. Parts of their development are linked to coastal ecosystem services that may be compromised as they deteriorate. With increasing manifestations of climate change, salt intrusion is likely to increase due to sea level rise and alterations in precipitation patterns, reducing underground freshwater availability and allowing saline water to move to agricultural grounds.

Under component 3 (Catalytic concrete livelihood diversification and strengthening adaptation interventions at community level), the Sub-Project plans to introduce a climate-resilient agriculture strategy for addressing climate change vulnerabilities, including a strategy for addressing salt intrusion in underground water and the increasing of salinity levels in agricultural lands by four main approaches: Improving soil´s fertility and biophysical conditions by addressing salinity levels using agroecological techniques and other soil management solutions, crop-based adaptation introducing salt-resilient crops and other crop-based solutions, agriculture water management to maximize water availability and support water infiltration to underground layers and efficient strategies for agriculture land management and its synergies with urban and rural land. These

[97] **Beneficiaries calculation: direct + indirect.** Direct (targeted with high intensity): Lead farmers (estimation of 20 per community) x Rural Average Household Size (estimation of 4). Indirect (i. targeted with medium intensity + ii. not targeted with medium intensity): i. zero; ii. Lead farmers x Neighbours (estimation of 2).



activities will be introduced in an initial experimental plot, which will also hold the Agriculture Community Centre (ACC) supporting the adoption of all new strategies and technologies.



Annex Figure 12 Climate-resilient approaches for reducing communities' vulnerability and improving livelihoods in Ghana.

Climate-resilient agriculture approaches:

Agriculture, urban and rural land management: Proper use of land is a priority for sustainable climate-resilient agricultural production and for ensuring productive agri-food systems. Urban growth and urban expansion can become stress drivers for agricultural land loss. In order to attend this challenge in the communities, trainings for agriculture land management and controlling urban expansion will be implemented. These training courses will include an approach where agricultural land has importance within the regional ecological landscape and as an economic driver in the region.

Soil regeneration:

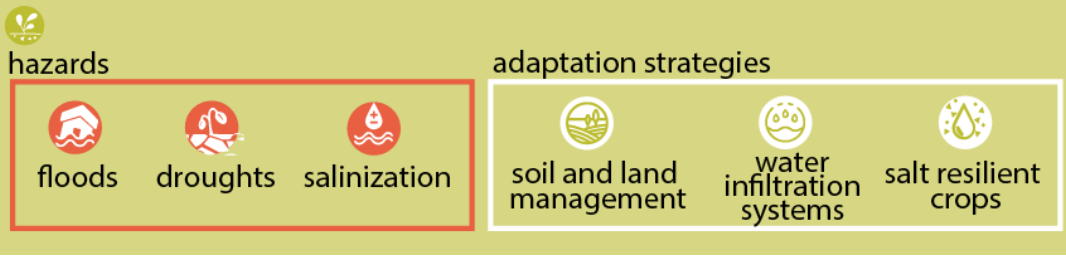
The activities regarding soil regeneration introduce conservation agriculture practices, such as the principle of minimum soil disturbance, the implementation of permanent soil covers and efficient use of organics inputs for reducing soil salinity and improving the fertility for a more productive yield. These activities will not be beneficial just for improving soil productivity, but also for guaranteeing soil regeneration and sustainability.

Crop-based adaptation:

Currently, communities' crop production is based on shallots, bell pepper, tomatoes, onions, carrots, and cabbages in small proportion. In addition, in the last years, sugar beet and harish potato have been introduced. Taking advantage of the communities' capacity of adapting different crops, climate-resilient agriculture includes a crop-based management approach by implementing technical trainings for local farmers. Within these trainings, salt-resilient crops such as varieties of sugar, spinach, carrots, potatoes, cauliflower, eggplant and oca will be introduced, combining them with other crop management practices such as crop rotation and association of local crops. These activities can jointly improve communities' resilience by increasing the number of types of crops that can be produced. In addition, to guarantee a full adoption of the new salt-resilient crops, agribusiness models will be developed which will be supported by initial cost-efficient and cost-effective analysis.

Water management for agriculture purposes:

In the Keta and Volta region, agriculture-based communities use small-scale intensive irrigation systems. Using hydrologic resources from the area, wells are used to manually obtain fresh water from the aquifers. Then, water is pumped and sprinkled to hydrate the crops. In other cases, water



can be found using traditional agriculture digging 1 meter to 2 meters where water can be found easily. To reduce saline intrusion on underground levels and reduce flood risks in agricultural land, an aquifer recharge strategy will be developed by installing water infiltration systems where agriculture is practiced and is vulnerable to salt intrusion and floods. These water infiltration systems will be implemented where soil moisture levels, fresh-brackish groundwater availability, infiltration capacity and other geophysical and water levels are clearly defined.

The water infiltration systems will be integrated by water infiltration trenches and wells, so as small ponds that are capable of varying degrees of permeability into the different underground layers. This technology will significantly reduce the probability of flood risks in the area and will reduce levels of soil erosion. Additionally, for a comprehensive water management strategy, rainwater systems and dipping irrigation systems for crop irrigation will be implemented as farmers are introduced into different training irrigation techniques.

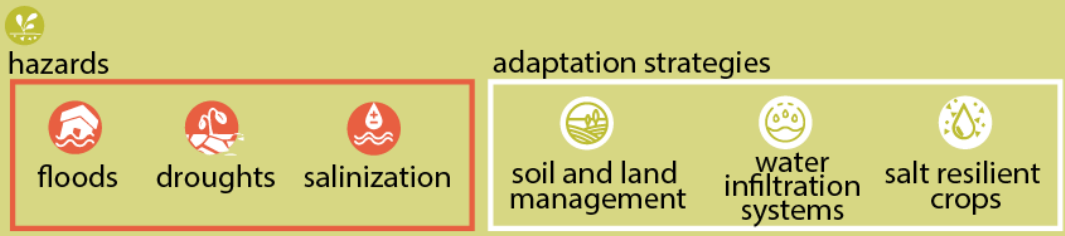
Lead farmers and plot expansion:

In Ghana, The Agriculture Community Centre will be situated in Tegbi, having a total area of 5 acres. In this centre, A *first batch* formed by 6 groups of 10 lead farmers from each community will be trained during one season, giving a total of 60 team leaders per season. Each year has two crop seasons, therefore the total amount of farm leaders trained per year will be 120. By the second year a *second batch* of lead farmers are expected to be trained (120) including both seasons, while the lead farmers trained during the previous year will start to replicate the best practices in one of their owned plots, these will add a total of 120 acres (20 acres per community) in the second year. By the third year a *third batch* of lead farmers are expected to be trained (120), while the lead farmers trained the previous year will start to replicate the best practices in one of their plots, these will add a total of 120 acres (20 per community) in the third year. During the last half a year of the project implementation, no new lead farmers will be trained. However, the previous lead farmers will start to replicate the best practices in one of their plots, these will add a total of 120 acres (20 acres for each community) in the third year. The total amount of plots with adopted climate-resilient practices will be **365 acres** and the total lead farmers adopting the strategy will be **360.**

Annex Table **4** Number of farmers and acres practicing climate-resilient practices in Ghana.

Year	Farmers in Ghana per community							Acres in Ghana per community						
	Tegbi	Whuti	Anloga	Woe	Dzita	Agbledomi	Total	Tegbi	Whuti	Anloga	Woe	Dzita	Agbledomi	Total
1	20	20	20	20	20	20	120	5	0	0	0	0	0	5
2	20	20	20	20	20	20	120	20	20	20	20	20	20	120
3	20	20	20	20	20	20	120	20	20	20	20	20	20	120
4	0	0	0	0	0	0	0	20	20	20	20	20	20	120
TOTAL Per community	60	60	60	60	60	60	360	60	60	60	60	60	60	365

In Cote d´Ivoire, the Agriculture Community Centre will be situated in Tiémien, having a total area of 5 acres. In this centre, A *first batch* formed by 3 groups of 10 lead farmers from each community will be trained during one season, giving a total of 60 team leaders per season. Each year has two crop seasons, therefore the total amount of farm leaders trained per year will be 60. By the second year a *second batch* of lead farmers are expected to be trained (60) including both



seasons, while the lead farmers trained during the previous year will start to replicate the best practices in one of their owned plots, these will add a total of 60 acres (20 acres per community) in the second year. By the third year a *third batch* of lead farmers are expected to be trained (60), while the lead farmers trained the previous year will start to replicate the best practices in one of their plots, these will add a total of 60 acres (20 per community) in the third year. During the last half a year of the project implementation, no new lead farmers will be trained. However, the previous lead farmers will start to replicate the best practices in one of their plots, these will add a total of 60 acres (20 acres for each community) in the third year. The total area of plots with adopted climate-resilient practices will be **185 acres** and the total lead farmers adopting the strategy will be **180.**

Annex Table 5 Number of farmers and acres practicing climate-resilient practices in Cote d´Ivoire.

Year	Farmers in Ghana per community				Acres in Ghana per community			
	Tiémen	Attoutou B	Taboth	Total	Tiémen	Attoutou B	Taboth	Total
1	20	20	20	60	5	0	0	5
2	20	20	20	60	20	20	20	60
3	20	20	20	60	20	20	20	60
4	0	0	0	0	20	20	20	60
TOTAL Per community	60	60	60	180	65	60	60	185

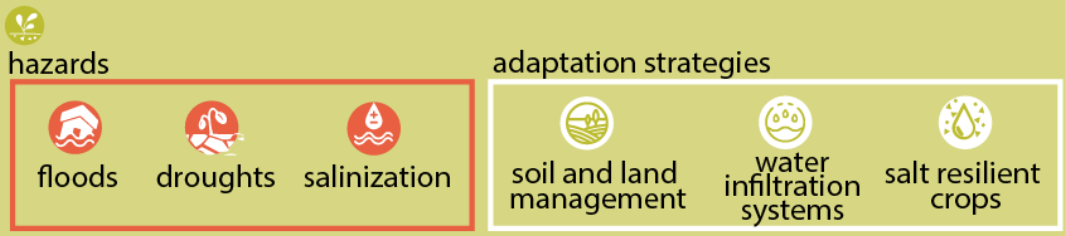
INNOVATION

Innovation will be achieved in the agricultural practices implemented by including a comprehensive methodology for delivering benefits and creating radical shifts in the region. This approach not just focuses in introducing salt-resilient crops, but it integrates four embedded approaches. Crop-based management for assessing the introduction and adoption of salt-resilient crops, inclusion of agroecological practices such as crop rotation and association, soil regeneration following conservation agriculture methods, water management, focused on taking advantage of rainwater and refilling aquifers with infiltration systems and agriculture land management. This initiative represents one of the most crucial adaptation innovations for the region and the communities as is envisioned in landscape sustainable perspective.

IMPLEMENTATION STRATEGY AND PLANNED ACTIVITIES

Preparation

1. An Implementation plan will be put in place to supervise and coordinate the activity (component 2). Identified NGO's with relevant experience and previous projects in soil regeneration, agriculture land management, crop adaptation and water management for agriculture purposes in the same region will execute the subproject.
2. Detailed hydrogeological and soil studies will be developed, including a soil salinity assessment. In addition, analysis of socio-economic aspects for integrating new crops will be implemented, including the analysis and development of sustainable economic models in the value chain.
3. Preparation of the ACC and validation of farmers´ plots (stakeholders meeting and field work) where salt-resilient crops and water management practices will be introduced.
4. Development of a rainwater harvesting approach joint to the irrigation and water infiltration systems.



Operation

- Water infiltration system construction. The NGO will provide training and support the development of institutional arrangements inside the communities for the installation and operation systems. Additionally, technical expertise has been secured from development partners
- Settlement of the ACC for climate-resilient agriculture. The funding for the initial 4 years is included as part of the project, and after that the project will receive income from the operation of the systems as well as the training of additional communities with interest to develop similar solutions for agriculture and water infiltration.
- Implementation of trainings related to soil regeneration, agriculture land management, salt-resilient crops adaptation and water management will be developed throughout the year, following seasonal dynamics and in accordance with the community necessities. Trainings will be held initially at the CTC and furtherly, practices will be adapted and replicated to the communities' plots.

Monitoring and maintenance

1. Maintenance during the project duration will be done by the NGO in collaboration with the local community. The NGO will progressively phase out its role as community members become more proficient in the maintenance and operation of the systems. Maintenance trainings are budgeted in the project and will be conducted by the NGO with the different community groups part of the initiatives.
2. Raising awareness and capacity building (component 2) and Resources and livelihoods management plan will be developed (component 2).
3. CREMA By-laws enacted by the district assembly for the protection of the installed systems and pilot structures which will impose fines etc.

Locations – Ghana

Wokumagbe

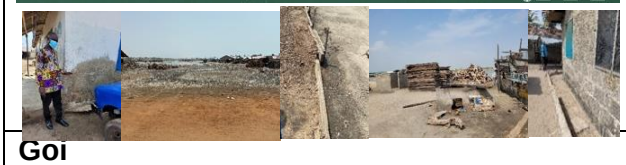
Highlights from the consultation process:

1. **Floods:** approximately 2 times/year the community face strong flooding. The floods are caused by the strong rains during raining season (August to October) but also from the rise of lagoon level. Water from rainfall gets cumulated in the agriculture, saturating the soil. There is no vegetation between the community and the lagoon.
2. **Warning and safe areas:** Due to the flood, people whose houses are flooded find rescue in neighbours houses and families in the community. No communication or alarm system exist to send early warmings or guidance, but there was an informal and private communication centre in the community – the owner used megaphones to announce and mechanise goods.
3. **Ecosystem**: water from the sea changes the property of the lagoon and sea fishing has become the major source of food (previously also lagoon fishing).

Direct beneficiaries:

333 (♀:176, Y:170). 666 (♀:353 Y:340) 1.664(♀:882 Y:849)

Akplabanya



Highlights from the consultation process:

- **Floods:** approximately 3 times/year the community face strong flooding. Similar to Wokumagbe, water from rainfall gets cumulated in the settlement, among the houses, and the rise of level of the lagoon (both from ocean and rain fall) inundates houses along the lagoon.
The community 'receives water from the front (ocean), back (lagoon) and from rainfall'. To address the rainwater in within the houses, people have tried to build small drainage channels, which are too rudimentary and not efficient. There is no vegetation between the community and the lagoon.
- **Warning and safe areas:** Due to the flood the people, move to another area (referred as Mokuogo island) for days until the water goes down. Similar to Wokumagbe, no communication or alarm system exist to send early warmings or guidance, but there is a (private) communication centre in the community – the owner uses megaphones to announce and mechanise goods.

Direct beneficiaries:

1.042 (♀:531, Y:365). 2,083 (♀:1.062 Y:729) 5.208 (♀:2.656 Y:1.823)

Goi

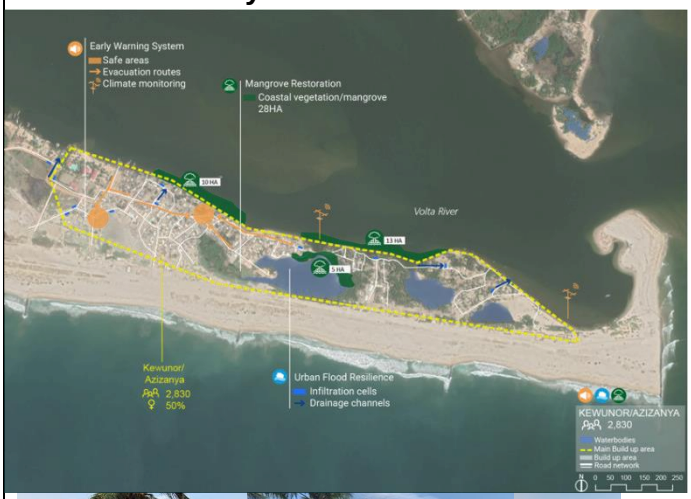
Highlights from the consultation process:

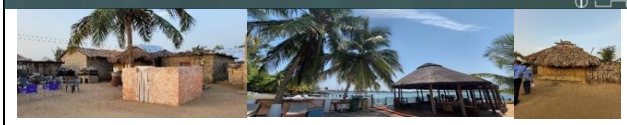
- **Floods:** when there are storms or high ocean tides, seawater invades the coastal lagoon, causing accelerated sediment accumulation and flooding of houses near the lagoon. Strong rainfall contributes to the flooding near lagoon and the run-off. Floods mainly impact community health (diseases) and the life of families along the lagoon.
The community builds yearly (and manually) a large drainage channel to drain water from the lagoon to the ocean. Additionally, the community places waste between the lagoon and the ocean as a strategy to create a physical barrier.
- **Warning and safe areas:** there is no warning of storms.
- **Ecosystem:** there is very few vegetation between the ocean and the lagoon, and between the lagoon and the community. The previous existing mangrove in the lagoon area has been destroyed. Agriculture has been challenged by the rain pattern change, drought, and heat. Change in properties of the lagoon has reduced fishes. The 'new lagoon' between the ocean and the community changes the environmental characteristics.

Direct beneficiaries:

747 (♀:396, Y:254). 1.494 (♀:792 Y:508) 3.734 (♀:1.979 Y:1.269)

Kewunor.Azizanya





Highlights from the consultation process:

- **Floods:** When there are storms or high ocean tides, both sea and lagoon level rise. Due to the accumulation of water between the buildings and floods, parts of the communities become 'water points', changing the environmental characteristics, and generation new floodable areas. Floods happen along the Volta River and around the 'water points.'
- **Warning and safe areas:** Floodable areas there is no warning of storms. Even though there are floods within the community, there is no need of high impact on relocation plan. The floodable are already consolidated new water points, impacting the community size and its vulnerability. There is a need of early warmings or guidance during floods. No communication or alarm system exist to send early warmings or guidance, but there is a (private) information centre in the community – the owner uses megaphones to announce and mechanise goods.
- **Ecossystem:** The few existing plants are concentrated around the consolidated floodable area/water points within the settlement and some coconut trees between the sea and the community, but they do not protect the community from flooding. Change in properties of the lagoon has reduced fishes.

Direct beneficiaries:

578 (♀:289, Y:301). 1.156 (♀:578 Y:601) 2.889 (♀:1.445 Y:1.503)

Agorkedzi/ Atiteti

Highlights from the consultation process:

- **Floods:** similar to Goi, when there are storms or high ocean tides, seawater invades the coastal lagoons, causing erosion, sediment accumulation and flooding of houses near the coastal lagoons. In the back of the community, the lagoons connected to the Volta River also overpass the capacity. Over 20 times/year families need to leave their houses due to the flood. The community has built small, rudimentary channels to drain water, but it is not sufficient.
- **Warning and safe areas**: Due to flood, people find rescue in the 'Safe Heaven', a 50x50m space built by the Volta River Authority. Similar to Wokumagbe, no communication or alarm system exist to send early warmings or guidance, but there is a (private) information centre in the community – the owner uses megaphones to announce and mechanise goods.
- **Ecosystem:** the few vegetation between in the lagoons' surroundings are limited to coconut and bushes. Not far from Agorkedzi, mangrove has been planted and restored by the Wildlife Commission in collaboration with the community. Change in properties of the lagoon has reduced fishes.

Direct beneficiaries:

500 (♀:265, Y:265). 1.000 (♀:530 Y:530) 2.499 (♀:1.325 Y:1.325)

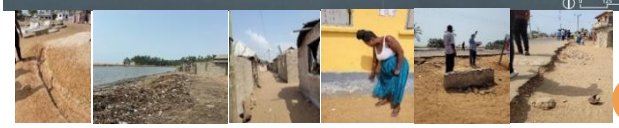
Agbledomi

- **Floods**: when there are storms or high ocean tides, seawater invades the coastal lagoons, causing erosion and sediment accumulation and flooding of houses near these coastal lagoons. Approximately 1 time/year flooding largely impacts the community.
- **Warning and safe areas:** there is no warning of storms.
- **Ecosystem:** there is very few vegetation between the ocean and the lagoon, and between the lagoon and the community. The previous existing mangrove in the lagoon area has been destroyed to use the wood (build houses, fish cooking and energy generation). Agriculture has been challenged by the rain pattern change, drought, salinization, and heat. To address this issue and boost production, the community has started to use fertilizers and chemicals, however, with the floods it has also harmed the environment. Change in properties of the lagoon has reduced fishes.

Direct beneficiaries:

993 (♀:507, Y: 546). 1.986 (♀:1.013 Y:1.093) 4.966 (♀:2.533 Y:2.731) 240 (♀:122 Y: 132)

Dzita



- **Floods:** 3 times/year Dzita is deeply impacted by floods. Similar to Goi, when there are storms or high ocean tides, seawater invades the coastal lagoons, causing erosion, sediment accumulation and flooding of houses near the coastal lagoons. The road 'between' the lagoon and the main part of the settlement also gets flooded and water runs towards the back of the community (north), area of lower topography, where it accumulates. The community have built small and rudimentary channels to drain water towards the back of the community, to avoid flooding houses along the way.
- **Warning and safe areas:** Due to the flood, people whose houses are flooded find rescue in the 'Safe Heaven', a space built by the Volta River Authority. Similar to other communities, no communication or alarm system exist to send early warmings or guidance. However, information is usually casted through a (private) communication centre in the community – the owner uses megaphones to announce and mechanise goods.
- **Ecosystem:** there is very few vegetation between the ocean and the lagoon, and between the lagoon and the community. The previous existing mangrove in the lagoon area has been destroyed. A major part of the settlement (part that doesn't flood) is extremely arid. Agriculture has been challenged by the rain pattern change, salinity, drought, and heat. Change in properties of the lagoon has reduced fishes.

Direct beneficiaries:

602 (♀:319, Y: 307). 1.204 (♀:638 Y:614) 3.011 (♀:1.596 Y:1.536) 240 (♀:127 Y: 122)

Whuti

- **Floods:** 1 time/year houses near the lagoons are deeply impacted by flooding. Most houses in the settlement are protected of sea and lagoon level rise thanks to the agriculture land, but production gets destroyed with flooding. Coastal lagoon flooding impact fewer houses if compared to the riverine lagoon, where there are more houses and agriculture land is narrower. During the rest of the year, floods impact agriculture and fishing.
- **Warning and safe areas:** there is no warning of storms, although a system to inform the community on accurate weather data would be very helpful to agriculture production.
- **Ecosystem:** agriculture is the only vegetation between the lagoons and the community. Lagoon property have changed due to the sea level rise, risen temperature, run-off and sediment accumulation. Change in properties of the lagoon has reduced fishes.

Direct beneficiaries:

473 (♀:251, Y:218). 946 (♀:501 Y:435)

2.365 (♀:1.253 Y:1.088) 240 (♀:127 Y:110)

Lagbati/ Lashibi

- **Floods:** both agriculture land on the seaside and on the lagoon side flood due to strong rains and high tides. Houses along the lagoons have also been impacted sea/lagoon level rise as a consequence of the accelerated sedimentation of the lagoon. Land on the Keta Lagoon side ('back of the community') has extensive low-level topography and is deeply vulnerable.
- **Warning and safe areas:** Similar to other communities, no communication or alarm system exist to send early warmings or guidance. However, information is usually casted through a (private) communication centre in the community to announce and mechanise goods. The communication does not reach all the community (use of 01 single megaphone). A communication centre exists but does not reach all the community. The EWS to inform the community on accurate weather data would be very helpful to agriculture production.
- Ecosystem: agriculture is the only vegetation between the lagoons and the community - the previous existing mangrove in the lagoon area has been destroyed. Agriculture has been challenged by the rain pattern change, floods, drought, salinization, and heat. Change in properties of the lagoon has reduced fishes.

Direct beneficiaries:

4.640 (♀:2.459, Y:2.691)

23.199 (♀:12.296 Y:13.456) 240 (♀:127 Y:139)

Woe

- **Floods:** similar to Lagbati/Lashibi, Land on the Keta Lagoon side ('back of the community') has extensive low-level topography. In Woe, however, there is no barrier of agriculture between the Keta Lagoon and the community, and houses are more impacted. When there are strong rains, water gets cumulated in the community, and the lagoon area next to the agriculture land also overpasses the capacity. The lack of drainage, water run-off, accelerated sedimentation impact contribute to flood of the agriculture land.
- **Warning and safe areas:** similar to other communities, no alarm system exist to send early warmings or guidance. However, an FM radio station (Keta Radio) casts weather information daily (mornings). Additionally 3 (private) communication centres use megaphones to share information and merchandise goods.
- **Ecosystem:** vegetation between the lagoons and the houses do not protect the community (bushes). Agriculture has been challenged by the rain pattern change, floods, drought, salinization, and heat. Change in properties of the lagoon has reduced fishes.

Direct beneficiaries:

2.172 (♀:1.108, Y:1.065).

10.862 (♀:5.540 Y:5.323) **240 (♀:122 Y:118)**

Tegbi

- **Floods:** agriculture land floods due to lagoon level rise and rainfall.
- **Warning and safe areas:** similar to other communities, no communication or alarm system exist to send early warmings or guidance. However, information is usually casted through a (private) communication centre in the community to announce and mechanise goods.
- **Ecosystem:** vegetation between the lagoons and the houses do not protect the community (bushes). Agriculture has been challenged by the rain pattern change, floods, drought, salinization, and heat. Change in properties of the lagoon has reduced fishes.

Direct beneficiaries:

2.484 (♀:1.341, Y:1.341). **4.968 (♀:2.683 Y:2.683)**

12.419 (♀:6.706 Y:6.706) **240 (♀:130 Y: 130)**

Locations – Côte d'Ivoire

Tefredji

- **Floods:** when there are storms or high ocean tides (September and October), the community faces erosion, accelerated sedimentation and flooding of roads and few houses near the coastal lagoon. Community has built small, rudimentary drainage channels.
- **Warning and safe areas:** no communication or alarm system exist to send early warmings or guidance, but there was an informal and private communication centre in the community – the owner used megaphones to announce and mechanise goods. The flood does not last more than 1 day.
- **Ecosystem:** there is no vegetation between the lagoon and the community, apart from coconut. The previous existing mangrove in the lagoon area has been destroyed.

Direct beneficiaries:

745 (♀:373, Y:45). **745 (♀:373 Y:45)**

3.726 (♀:1.863 Y:224)

Tiémien

- **Ecosystem:** even though sea level rise is not causing floods in the settlement, it is eroding the coast, where agriculture is practiced. In some parts of the community, there are vegetation and mangrove between the lagoon and the community. The previous existing mangrove in the lagoon area and vegetation has been destroyed to create agriculture areas. Agriculture has been challenged by the rain pattern change, drought, and heat. To have better condition for fishing, the community use tree branches to create a better environmental to have more fishing.

Direct beneficiaries:

541 (♀ :227 Y:422) **240 (♀ :125 Y:60)**

Attoutou B

- **Floods:** when there are storms or high ocean tides, the lagoon level rises, flooding the agriculture land. Within the settlement, spaces between the buildings and roads cumulate water and only few houses are impacted by flood.
- **Warning and safe areas:** there is no warning of storms, although a system to inform the community on accurate weather data would be very helpful to agriculture production. Women are responsible to produce cassava and this production have been impacted by the flooding from the lagoon.
- **Ecosystem:** there is very few vegetation between the lagoon and the community. The previous existing mangrove in the lagoon area has been destroyed to use the wood (build houses, fish cooking and energy generation).

Direct beneficiaries:

323 (♀ :142, Y:128) **1.616 (♀ :711 Y:638)** **240 (♀ :106 Y: 95)**

Grand-Jacques

- **Floods:** when there are storms or high ocean tides, seawater invades the coastal line. The water and sediment get stagnated in the community, causing flooding of roads and few houses near the coast. There is no vegetation protection between the ocean and the settlement.
- **Warning and safe areas:** there is no warning of storms. a system to inform the evacuation routes and non-floodable areas, especially in coastal line, would guide the community during floods.
- **Ecosystem:** The previous existing vegetation close to the community have been given place to a large coconut plantation.

Direct beneficiaries:

681 (♀:306, Y:82). 1.362 (♀:613 Y:163)

Koko

- **Floods:** when there are storms or high ocean tides, the lagoon level rises, flooding the agriculture land. Within the settlement, spaces between the buildings cumulate water and only few houses are impacted by flood. During raining season, the women that are mostly working with cassava production, are not able to work properly.
- **Warning and safe areas:** there is no warning of storms, although a system to inform the community on accurate weather data would be very helpful to agriculture production.
- **Ecosystem:** there is very few vegetation between the lagoon and the community. The previous existing mangrove and forests in the lagoon area has been destroyed to use the wood (build houses, fish cooking and energy generation).

Direct beneficiaries:

156 (♀:73, Y:28) 782 (♀:367 Y:141)

Taboth

- **Ecosystem:** there is very few vegetation between the ocean and the lagoon, and between the lagoon and the community. The previous existing mangrove in the lagoon area has been destroyed.

Direct beneficiaries:

899 (♀:494 Y:162) 240 (♀:132 Y: 43)

Vitré 2

- **Floods:** when there are storms or high ocean tides, the lagoon level rises, flooding the agriculture land. Within the settlement, spaces between the buildings cumulate water and only few houses near the lagoon flood often. Approximately 1 time/year flooding largely impacts the community. Warning and safe areas: there is no warning of storms. A a system to inform the community on accurate weather data would be very helpful to agriculture production.
- **Ecosystem:** there is very few vegetation between the lagoon and the community. There was mangrove before in the lagoon area, but the most part of it has been destroyed to use the wood (build houses, fish cooking and energy generation). Property of the lagoon water has changed and impacted fishing.

Direct beneficiaries:

282 (♀:127, Y:42). 282 (♀:127 Y:42)

1.412 (♀:635 Y:212)

Azzuretti

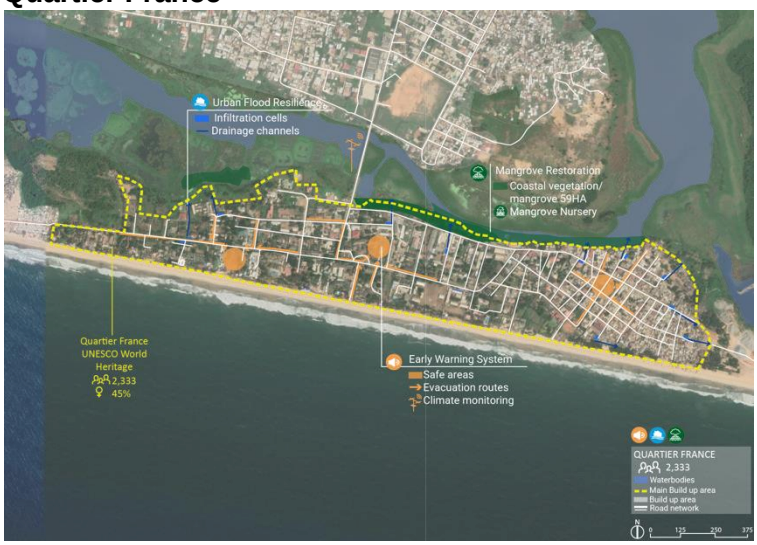
- **Floods:** approximately 3 times/year the community face strong flooding. The community 'receives water from the front (ocean), back (lagoon) and rainfall'. There is no vegetation between the community and the lagoon.
- **Warning and safe areas:** due to the flood, people whose houses are flooded find rescue in neighbours houses and families in the community. No communication or alarm system exist to send early warmings or guidance, but there was an informal and private communication centre in the community – the owner used megaphones to announce and mechanise goods.
- **Ecosystem:** deforestation of mangrove for firewood and water from the sea changes the property of the lagoon.

Direct beneficiaries:

279 (♀:145, Y:69). 279 (♀:145 Y:70)

1.397 (♀:727 Y:349)

Quartier France



- **Floods:** when there are strong rains, approximately 50% of the community gets flooded. People in the community even use traditional boats for transportation within the community. Due to the rising of water level, water from rainfall gets cumulated and easily flood parts of the community. During September and October of 2020, Quartier France was completely flooded. There is no vegetation between the community and the lagoon.
- **Warning and safe areas:** Due to the flood, people whose houses are flooded find rescue in neighbours houses and families in the community. A Cultural Centre called 'Joao Batista' is used as safe heaven during flooding. No communication or alarm system exist to send early warmings or guidance. However, information is usually casted through a (private) communication centre in the community – the owner uses megaphones to announce and mechanise goods.
- **Ecosystem:** Agriculture has been challenged by the rain pattern change, drought, and heat.

Direct beneficiaries:

479 (♀:215, Y:129). 479 (♀:215 Y:129)

2.394 (♀:1.077 Y:646)

Mondoukou

- **Floods:** approximately 2 times/year the community face strong flooding. The floods are caused by the strong rains during raining season (August to October) but also from the rise of lagoon level. Water from rainfall gets cumulated in the agriculture, saturating the soil. There is no vegetation between the community and the lagoon.
- **Warning and safe areas:** due to the flood, people whose houses are flooded find rescue in neighbours houses and families in the community. No communication or alarm system exist to send early warmings or guidance, but there was an informal and private communication centre in the community – the owner used megaphones to announce and mechanise goods.
- **Ecosystem:** water from the sea changes the property of the lagoon and sea fishing has become the major source of food (previously also lagoon fishing).

Direct beneficiaries:

287 (♀:138, Y:95). 287 (♀:138 Y:95)

ANNEX 3: CONSULTATION

This annex presents the overview of the consultations held by year, detailing the stakeholders, objective and outcomes by consultation. Throughout the project proposal development, many challenges to involve vulnerable groups were faced due to local content both culture and social dynamics. Women participation has increasingly been achieved. The vulnerable groups AF guidelines on consultation and gender were strictly followed and all efforts prior to consultations were made (communication and identification of each representative, follow-up and active engagement). Detailed list of participants and further detailed information is provided in Consultation Details and Evidence.

The results of all consultations are reflected in the project proposal, specifically under the Part II.I Consultative process, the Annex 1: Vulnerability Analysis and the Annex 2: Subproject Sheets.

2016 – Project Phase: Conceptualisation

Ghana and Côte d'Ivoire:

Type: Private meetings.	Participants: government bodies and program entities.
Objective: define the scope of the pre-concept note, ensuring alignment with national priorities (i.e. national strategies and plans).	

2017– Project Phase: Concept Note Development

Ghana:

In 2017, 17 private meetings were held with government bodies with the objective to define the scope of the pre-concept note, ensuring alignment with national priorities (i.e. national strategies and plans). 12 group discussions with the communities were also held with the objective of reflecting the priorities of vulnerable groups into the Concept Note, women representation was 40%.

Type: 17 Private meetings		**Participants:** government bodies and program entities.	
Date	Stakeholder	Consultation objective	Outcomes and Conclusion
16-17 nov Bonn	Ministry of Environment, Science, Technology and Innovation	▪ Agree on AF proposal priorities and target areas (districts level) ▪ Understand national priorities ▪ Identify relevant projects and lessons, concerns and complementary potential	• Agreement of roadmap for developing the proposal
6 nov 2017	Ministry of Local Government and Rural Development	▪ Agree on AF proposal priorities and decentralized implementation modality ▪ Identify relevant projects and lessons, concerns and complementary potential	• Agreement on AF proposal priorities and decentralized implementation modality, including for spatial planning • Need to complement WB project for Resilient Greater Accra Metropolitan Area (GAMA) where ministry takes a coordinating role • Invite both leading ministries for World Urban Forum 9 (7-13 Feb 2018) to discuss international cooperation and needs • Organise National – district workshop to agree on national – local implementation modality and interventions after the WUF
December 2017	Tema metropolis	▪ Agree on AF target areas (community level) ▪ Identify focal point ▪ Understand local issues and needs ▪ Identify relevant projects and lessons, concerns and complementary potential	• Priority community: newtown informal settlement • Focal point: Ofori Joseph (assembly representative)
December 2017	Ningo Prampram district		• Priority communities: Prampram informal harbour area, old ningo and Ayitepa • Focal point: Aboagye Aaron (Physical Planning Officer), Old Ningo: Dzamaku Enoch, Prampram: Solomon Tangman, Ayitepa: Sampson Adjaklo

December 2017	Ada West district		• Priority communities: Akplabanya, Goi and Kportitsekorpe, Focal point: Agbeve S. S. (Planning Officer), Akplabanya: Amos Kwao, Goi: John Tsiri, Kportitsekorpe: Joseph Ahuakese
December 2017	Ada East district		• Priority communities: Totope, Azizanya and big Ada, Focal point: Gyamfi Kwadwo (assistant director), Big Ada: Awal Iddrisu
December 2017	Keta district		• Priority communities: Fuvemeh, Woe, Anloga, Vodza, Focal points:, Fuvemeh: Oswald Etse, Woe: Victor Amekudzi, Anloga: Ernest Agbota • Communities don't always trust government involvement • Overlap with other projects has been checked
6 nov 2017	UN Residence coordinator	▪ Agree on cooperation modality / alignment with other UN projects	• Complement UNCDF Local project
6 nov 2017	UNDP	▪ Understand main issues, concerns and needs in target areas / communities. ▪ Understand relevant projects and lessons, concerns and complementary potential, esp. AF Funded project: 'Increased Resilience to Climate Change in Northern Ghana through the Management of Water Resources and Diversification of Livelihoods and NAP process	• Align with NAP process • Northern project not relevant
10 nov 2017	UNCDF	▪ Understand main issues, concerns and needs in target areas / communities; ▪ Understand relevant projects and lessons, concerns and complementary potential, esp. LoCal project	• Will align with LoCal project but is very small (US$125,000) • Possible option to scale up Local within UN-Habitat / AF project framework
7 and 10 nov 2017	Development Institute / Ghana Delta alliance Wing	▪ Understand main issues, concerns and needs in target areas / communities; ▪ Understand relevant projects and lessons, concerns and complementary potential, esp. government and NGO related projects ▪ Discuss cooperation options for community assessments	• Basic assessments already conducted with Delta alliance in Keta • Good understanding of local issues and good network • DECCMA project leader is part of Delta Wing board. • Cooperate to conduct community level surveys and focus group discussions • Use DECCMA assessments already done.
7 and 10 nov 2017	Hen Mpoano NGO	▪ Understand main issues, concerns and needs in target areas / communities; ▪ Understand relevant projects and lessons, concerns and complementary potential, esp spatial mapping, fishing and community level related work ▪ Discuss potential cooperation options	• Good understanding community level work and spatial (drone) mapping and modelling. • Possibly cooperate to fully map communities and risk areas for full proposal • Partner for community level work during project
7 nov 2017	USAID / Ghana CRC/URI PACT Tetra tech	▪ Understand main issues, concerns and needs in target areas / communities; ▪ Understand relevant projects and lessons, concerns and complementary potential, esp. West Africa Biodiversity and Climate Change Program (WA BiCC) and Ghana sustainable fisheries management project'	• WA BICC project has no implementation in Ghana • Little lessons available from other countries because of initial stage • Monitor possible lessons in Côte d'Ivoire
7 nov 2017	Spatial solutions	▪ Understand main issues, concerns and needs in target areas / communities; ▪ Understand relevant projects and lessons, concerns and complementary potential, esp. related to spatial planning in target areas	• Good understanding of spatial planning needs and processes • No spatial plans exist in target areas (except greater Accra plan which included Tema and Prampram at high level) but new government prioritizes spatial planning • Government did not prioritize the development of spatial plans in target areas because of lack of oil and economic need • Estimated cost for a structure plan done by private company is US$ 1,3 m and for a district US$370,000 • Willingness and need to develop spatial plans in target areas at district and local level focused on identifying risk areas, current and future land use needs and long-term coastal management needs

Type: 12 Field consultations	**Participants**: local community (e.g. fisherman, student, pensioner, oyster trader, food seller, coconut seller)		
Vulnerable groups representation: Four minority ground participated (women, disabled, youth and elderly).			**Gender:** 40% of participants were women
Date	**Stakeholder**	**Consultation objective**	**Outcomes and Conclusion**
December 2017	12 Local communities	▪ Understand target population, poverty, poverty rates, means of livelihoods and community assets.	• Results are under Part III.C Measures For Environmental And Social Risk Management, As well under the interventions Feasibility sheets from the ESIA. • Climate change hazards and risks identified. Specifically, it was identified that floods, salinization droughts, sea/lagoon level rise, coastal erosion, accelerated sedimentation

		▪ Identity vulnerable groups (women, youth, elderly and disabled) specific challenges and needs. ▪ Identify Climate change related hazards, risks, impacts and vulnerabilities. ▪ Barriers to adapt to the identified impacts.	and heatwaves challenge various communities. Results are in Annex 1 Vulnerability Analysis.

Côte d'Ivoire:

In 2017, 14 private meetings were held with government bodies with the objective to define the scope of the pre-concept note, ensuring alignment with national priorities (i.e. national strategies and plans). 09 group discussions with the communities were also held with the objective of reflecting the priorities of vulnerable groups into the Concept Note. In that year, women representation was 27%.

Annex Table 8 Private meetings, Côte d'Ivoire

Type: Private meetings		**Participants:** government bodies and program entities.	
Date	**Stakeholder**	**Consultation objective**	**Outcomes and Conclusion**
13 nov 2017 Bonn / COP 23	Ministry of Urban Sanitation, Environment and Sustainable Development	▪ Agree on AF proposal priorities and target areas (districts level) ▪ Understand national priorities ▪ Identify relevant projects and lessons, concerns and complementary potential	✓ Agreement of roadmap for developing this proposal ✓ Invite both leading ministries for World Urban Forum 9 (7-13 Feb 2018) to discuss international cooperation and needs ✓ Organise National – district workshop to agree on national – local implementation modality and interventions after the WUF
Through above ministry	Ministry of Construction, Housing, Sanitation and Urban Planning		
16 nov 2017	Cocody Department	▪ Agree on AF target areas (community level) ▪ Identify focal point ▪ Understand local issues and needs ▪ Identify relevant projects and lessons, concerns and complementary potential	✓ Priority community: Cocody village, Blockhaus, M'pouto, M'Badon ✓ Focal point: Mayor: N'goan Aka Mathias ✓ M'Pouto: Ceke Nangai ✓ M'Badon: Djoman Bogue ✓ Target communities identified ✓ Mayor is a driver of eco-city concept and empahises the need to adapt to climate change – thus he could support political mobilization
16 nov 2017	Bingerville Department		✓ Priority community: Bingerville, Aghien, Akanje ✓ Focal point: Mayor: Beugre Djoman; Aghien: Alle allee Jean Pierre; Bingerville: Bagodou Augustin; Akanje: Mobio ✓ Target communities identified ✓ Use good practice of mangrove planting
17 nov 2017	Jacqueville Department		✓ Priority community: Gand-jacq, Techmien, Kouve; ✓ Focal point: Aka Auguste (mayor). Grand-Jack: M Soppy Tiakpa Justin; Techmien: N'Geussan Francois ✓ Possibly utilise coping mechanisms of moving away from the shore in spatial planning approach ✓ Location to understand possible impacts of WACA project in Grand-Lahou
17 nov 2017	Grand-Bassam Departments		✓ Priority community: Moossou and Quartier France ✓ Focal point: Georges Ezalé, Mayor of Grand-Basam; Brindoumi, Chief Technical officer of the town hall; Aketchi Anselme, the youth leader ✓ Focus on possible involvement of hotels (i.e. private sector) in addressing erosion, possibly together with Assinie and Assouinde (which are tourism hotspots)
17 nov 2017	Port Bouet Department		✓ Priority community: centre and Adjoufou / Gonzagueville ✓ Focal point: Tanoh (technical service of the Town hall) ✓ Coastal erosion main issue. Possibly involve tourism sector
13 nov 2017	World Bank	▪ Agree on cooperation modality for potential coastal interventions in target areas	✓ Multi sector risk assessment has been done but not in Ghana ✓ Based on the assessment, interventions will focus on eco-systems, stabilisation of the coast and opening of the lagune in Grand-Lahou worth US$ 30 m

		▪ Understand main issues, concerns and needs in target areas / communities; ▪ Understand relevant projects and lessons, concerns and complementary potential, esp WACA project	✓ They lack complementary spatial planning intervention and are very open to coordinate ✓ Spatial planning important for ministry of Interior ✓ There will be a regional climate change observatory ✓ Potentially complement WACA project with spatial planning element in Grand-Lahou ✓ Involve ministry of Interior in project design
13 nov 2017	AfDB	▪ Understand main issues, concerns and needs in target areas / communities; ▪ Understand relevant projects and lessons, concerns and complementary potential, esp related to CC and urban development and AF projects	✓ AfdB uses ACCF to develop projects with national government for AF and GCF as a means to create government need for loans ✓ No overlap with AF proposal and AfdB process is new and therefore not fast ✓ Monitor process of AF project development and potential link with forest livelihoods
14 nov 2017	Abidjan Convention / UNEP	▪ Agree on cooperation modality for knowledge management ▪ Understand main issues, concerns and needs in target areas / communities; ▪ Understand relevant projects and lessons, concerns and complementary potential, esp related to Abidjan	✓ There will be a regional resource centre funded by USAID and IBM ✓ They have great knowledge of regional and national initiatives, projects and relevant documents which they will share ✓ They suggested to use scenario's for interventions and emphasize using a blue economy (spatial planning) approach (turning bad situations in opportunities) ✓ Use the regional resource centre as the main platform for KM / lessons from this project ✓ Identify potential other areas for cooperation ✓ Consider using scenario's for proposed interventions and blue economy (spatial planning) approach
14 nov and 16 nov 2017	Université Felix Houphouet Boigny, Abidjan / CURAT (remote sensing and GIS)	▪ Understand main issues, concerns and needs in target areas / communities; ▪ Understand relevant projects and lessons, concerns and complementary potential, esp government and NGO related projects ▪ Discuss cooperation options for community assessments	✓ CURAT does modelling of coastal morphology and hydrology in target areas and can do impact assessments ✓ Recent study: ocean current goes west – east except in Grand-Lahou and Grand-Bassam ✓ They work with WACA project ✓ There are 5 climate change / erosion hotspot areas in Côte d'Ivoire: Fresco, Grand-Lahou, Abidjan, Grand-Bassam and Assinie ✓ Focus on hotspot areas around Abidjan and Grand-Bassam (since WACA works in Grand-Lahou and USAID in Fresco ✓ Cooperate to conduct community level surveys and focus group discussions ✓ Consider working with CURAT to conduct EIA
17 nov 2017	Oceanographic Research Centre		✓ They have experience with conducting vulnerability assessments for the WB and USAID
14 nov 2017	École d'architecture D'Abidjan		✓ They are too expensive to conduct the vulnerability assessments at this stage
13, 15 and 16 nov 2017	Earth Right Institute	▪ Understand main issues, concerns and needs in target areas / communities; ▪ Understand relevant projects and lessons, concerns and complementary potential, esp. government and NGO related projects ▪ Discuss cooperation options for implementing (part) of the climate change plan for Cocody.	✓ Include Cocody most vulnerable communities in project ✓ Focus on integrating environmental / climate change risks in department and local spatial plans in target areas ✓ Cooperate to conduct community level surveys and focus group discussions. ✓ Involve ERI for conducting rapid community surveys
Type: 09 Field consultations.		**Participants**: local community and government.	
Vulnerable groups representation: Four minority ground participated (women, disabled, youth and elderly).			**Gender: 27**% of participants were women
Date	Stakeholder	Consultation objective	Outcomes and Conclusion
December 2017	**Local communities**	▪ Understand target population, poverty, poverty rates, means of livelihoods and community assets. ▪ Identity vulnerable groups (women, youth, elderly and disabled) specific challenges and needs. ▪ Identify Climate change related hazards, risks, impacts and vulnerabilities. ▪ Barriers to adapt to the identified impacts.	✓ Results are under Part III.C Measures For Environmental And Social Risk Management, As well under the interventions Feasibility sheets from the ESIA. ✓ Climate change hazards and risks identified. Specifically, it was identified that floods, salinization, droughts, sea/lagoon level rise, coastal erosion, accelerated sedimentation and heatwaves challenge various communities. Results are in Annex 2 Vulnerability Analysis.

2018 – Project Phase: Proposal Development

Ghana and Côte d'Ivoire:

In 2018, private meetings/workshops were held with implementing partners to define the project approach as well as the implementation and coordination mechanisms. Field consultations in targeted communities were also carried out to define the list of priority interventions.

Type: Private meetings/workshops		**Participants**: government, partner organisations and programmes.	
Date	Stakeholder	Consultation objective	Outcomes and conclusions
07-13 February 2018 at World Urban Forum	Leading ministries from Ghana and Côte d'Ivoire	Bring together leading ministries from Ghana and Côte d'Ivoire to: ▪ Agree on regional approach and coordination mechanisms ▪ Agree on / confirm list of priority interventions and target areas (especially related to larger interventions with potential international impacts)	• Regional approach for Ghana and CDI strategized. • Priority interventions discussed and alignment with the national priorities and reflected in the project.
March 2018 In Ghana and Côte d'Ivoire	Leading ministries and target districts in Ghana and Côte d'Ivoire	Bring together leading ministries and target district / department governments in both Ghana and Côte d'Ivoire to: ▪ Agree on implementation and coordination modalities ▪ Agree on / confirm list of priority interventions and target communities (especially related to spatial / land use planning and larger interventions)	• Implementation and coordination mechanisms agreed, as well as the outputs involving the government.
April - November 2018	Institutions to develop required models and conduct assessments	▪ Develop models / collect data required to understand impact of proposed interventions ▪ Conduct detailed vulnerability / risk mapping ▪ Conduct impact assessments / risk screening of proposed interventions / feasibility studies	• Data collected for the further vulnerability analysis and mapping.
Type: Field Consultations.		Participants: local community	
Vulnerable groups representation: During this effort special attention was put to ensure these activities will equally benefit and empower women and youth. Two minority grounds participated (women and youth).			
Date	Stakeholder	Consultation objective	Outcomes and conclusions
April 2018 In Ghana and Côte d'Ivoire	Target communities and vulnerable groups	▪ Agree on list of priority interventions at community level and understand specific needs and issues per vulnerable group and inclusion of gender-response interventions.	• The outcomes of consultations shaped the selection of proposed interventions at that stage. • Some of the proposed interventions were excluded due to cost inefficient (high costs), non-feasibility due to e.g environmental risks (e.g erosion generation in other areas) and non-preference of beneficiary groups. • In some discussions, new interventions were suggested by the communities (e.g. pen culture).
December 2018	Target communities and vulnerable groups in Ghana and Côte d'Ivoire	▪ Final selection / verification of proposed interventions by discussing the following criteria: ▪ Benefits to communities / groups ▪ Cost-effectiveness ▪ Sustainability / maintenance arrangements ▪ Environmental and social risks ▪ Confirm / identify design needs per vulnerable groups of proposed interventions	

2019 – Project Phase: Detail interventions, operability, management, and sustainability.

Ghana:

In 2019, 13 private meetings with partner organisations and government bodies, and 3 focus group discussions with communities' and districts' representatives were held with the objective of gathering information to detail the interventions and their operability, management and sustainability. 2 Workshops with all stakeholders were carried out at the end of the field mission to validate all project components for the proposal submission.

Annex Table 9 Overview consultations (private meetings and focus group discussions) mission April 2019

Type: 13 **Private meetings and 2 workshops**		**Participants**: academia, government and NGOs, District representatives and programmes.	
Date	Stakeholder	Consultation objective	Consultation Results
 3/04/19 Accra	▪ UNDP Gita Welch ▪ Resident representative Jennifer Asuako ▪ Programme Analyst (gender) Sylvia Sefakor Senu ▪ Economic analyst (youth)	- Identify relevant projects and lessons, concerns and complementary potential - Identify potential project risks and opportunities related to gender and youth	✓ No geographic overlap with UNDP projects ✓ Compliment GEF Guinea project about marine ecosystems ✓ Compliment REDD+ and GCF work on ecosystems ✓ Gender issue: limited participation and platforms; men control resources, including land ✓ Youth issue: want to be involved in new / innovative work - not conventional ✓ Information could be shared through mobile phones ✓ Need to involve both men and women to address resource control issues ✓ Youth: use youth groups / associations and focus on 'innovative' work such as ecotourism
 03/04/2019 Accra	▪ UNICEF Muhammad Rafiq Khan ▪ Chief of Child protection	- Identify relevant projects and lessons, concerns and complementary potential - Identify potential project risks and opportunities related to gender and children.	✓ No geographic overlap with UNICEF projects ✓ Cholera is an issue along the coast ✓ Children issue: human trafficking due to reduction in fish stock (income) + high-rate orphanages in Anloga/ Keta ✓ Project should focus on income for fishermen to avoid human trafficking
 03/04/2019 Accra	▪ Dutch embassy Janet Dufie Arthur ▪ Policy officer WASH	- Identify relevant projects and lessons, concerns and complementary potential	✓ Relevant NGOs / organisations in the Volta area: IUCN, Both End and Wetlands international ✓ IUCN, Both End and Wetlands international to be coordinated by the Development Institute (partner UN-Habitat)
 04/04/2019 Accra	▪ UNCDF Angela Yayra Amoah ▪ National project coordinator	- Identify lessons learned Local project and climate change project approach	✓ UNCDF channels climate change funding from national level to local level using a performance-based approach for districts to use the funding. ✓ Buy-in communities is important ✓ Project could consider similar approach that UNCDF uses if not too may delays and if makes sense with already identified actions and executing entities
 04/04/2019 Accra	▪ University of Ghana Ayaa K Armah ▪ Shrimp Marculture, coastal management, EIA, marine biodiversity conservation	- Understand EIAs requirements and process for Ghana	✓ Process can take up to 9 months but will include comprehensive assessment ✓ Consider Ayaa K. Armah for EIAs required by national law
 5/04/2019 Accra	▪ Ministry of Environment, science, technology and innovation Fredua Agyeman ▪ Director environment and AF DA	- Align with priorities ministry and discuss management arrangement - Compliance with rules, technical standards, and regulations	✓ Project is in line with priorities. ✓ Mr Agyman will appoint a focal point / deputy for the project to oversee it. ✓ District assemblies (district chiefs) and traditional chiefs are key, also to mobilise communities; ensure capacity of district assemblies is build / sustained ✓ Coordinate with WACA programme. ✓ Involve (the new) Coastal Development Authority (policy and coordination along the coast), EPA (environmental aspect of plans), NDPC, Hydrological authority and fishermen association
5/04/2019 Accra 	▪ Representatives from target districts, land use and spatial planning authority, university, NGO	- Agree on priority areas project - Agree on content components	✓ Component 1: work with land use and spatial planning authority and build capacity at district level; consider development of coastal / marine spatial plan (is a need, including study sediment flow etc.) ✓ Component 2: involve district chiefs and traditional chiefs and women and youth (through community groups / association) and awareness through church ✓ Component 3: involve Ministry of housing and construction for engineers (if needed) ✓ Component 5: consider involving African centre of coastal resilience – university of Cape (as they already monitor coastal erosion / sediment budget + coordinate with Coastal Development Authority
 12/04/2019 Accra	▪ Ministry of Environment, science, technology and innovation Fredua Agyeman ▪ Director environment and AF DA	- Verify approach and agree on way forward	✓ Project management arrangements (organigram) to be prepared and agreed upon by Fedua

12/04/2019 Accra	▪ Representatives from target districts, land use and spatial planning authority, university, NGO	- Verify / agree upon proposed adaptation measures - Get inputs on proposed adaptation measures - Agree on way forward	✓ Component 1: work with land use and spatial planning authority and build capacity at district level; consider development of coastal / marine spatial plan (is a need, including study sediment flow etc.) Align with ministry framework ✓ Component 2: involve district chiefs and traditional chiefs and women and youth (through community groups / association); and awareness through church ✓ Component 3: See above proposed measures ✓ Component 5: consider involving African centre of coastal resilience – university of Cape (as they already monitor coastal erosion / sediment budget + coordinate with Coastal Development Authority
 12/04/2019 Accra	▪ Environmental Assessment and Audit Department of EPA ▪ Kwabena Badu-Yeboah ▪ Ag Director EAA	- Understand process to conduct EIAs required by national law	Steps: ✓ Prepare a list of proposed adaptation measures and discuss what exactly will be required ✓ Register project ✓ Conduct studies required by UN-Habitat
8th October 9th October Sogakope	▪ Blue Deal Programme team	- Discuss complementarities and potential overlap with AF project. - Presentation on updates of the AF project to main stakeholders.	✓ Clear alignment between Blue Deal Programme future work in Ghana and UN-Habitat's AF proposal. Current challenge is the difference in timeframes. ✓ Well received presentation of UN-Habitat's project by all stakeholders, political will to support its implementation.
10th October Accra	▪ Land Use Spatial Planning Authority	- Discussion on component 1. Spatial Planning: objective, outcome, and budget.	✓ Overall agreement with the Land Use Spatial Planning Authority on project component 1 on Spatial Strategies. Follow up on detailing collaboration and geographical scope.
Type: 3 Focus Group Discussions		**Participants**: districts and communities' representatives (chiefs, youth and women organisations, elderly, fishermen and farmers, etc.)	
Vulnerable groups representation: Four minority ground participated (women, disabled, youth and elderly).		**Gender: 12%** of participants were women	
Date	**Stakeholder**	**Consultation objective**	**Outcomes and Conclusion**
 8/04/2019 Ada West communities	▪ Ada West Hon A.L. Akrofi ▪ District chief executive ▪ Community representatives (chiefs, women and youth organizations, elderly, fishermen, farmers	- Through focus group discussions, align possible adaptation measures with district and community priorities (2019-2021 development plans) and assess feasibility and data gaps (with Arcadis)	✓ Possible feasible adaptation measures related to coastal erosion/ tidal/sea floods and siltation (sea level rise, storms, etc.) in line with priorities (in district development plans and confirmed by chiefs): Wokumagwe, Aklabanya and Goi ✓ Main issues: Erosion + coastal floods, Flash floods, Dry lagoon in dry season + loss of livelihood in lagoon ✓ Possible adaptation measures: Coastal lagoon flood and drought management system + livelihood support (fish) Lolonya: ✓ Main issues: Erosion + coastal floods ✓ Possible adaptation measures: Raising the barrier + planting vegetation (with sand already there and community already trying)
 09/04/2019 Ada East Communities	▪ Ada East Sarah Dukbakie Pobee ▪ District chief executive ▪ **Community representatives** (chiefs, women and youth organizations, elderly, fishermen, farmers	- Through focus group discussions, align possible adaptation measures with district and community priorities (2019-2021 development plans) and assess feasibility and data gaps (with Arcadis)	✓ Possible feasible adaptation measures related to coastal erosion / tidal / sea floods and siltation (sea level rise, storms, etc.) in line with priorities (in district development plans and confirmed by chiefs): Azizanya / Kewunor: ✓ Main issues: Volta river and lagoon flooding; Limited livelihood options. ✓ Possible adaptation measures: Mangrove planting to maintain sediment and regulate water with gateway to reduce flooding + livelihood support (fish, crabs and ecotourism) Big Ada: ✓ Main issues: Volta flooding; Limited livelihood options (clams) ✓ Possible adaptation measures: Mangrove planting + raising the barrier with sediment from river (in the middle) by community?
	▪ Keta Oswald Etsey Kpodzo ▪ **Community representatives** (chiefs, women and youth organizations, elderly, fishermen, farmers	- Through focus group discussions, align possible adaptation measures with district and community priorities (2019-2021 development plans) and assess feasibility and data gaps (with Arcadis)	✓ Possible feasible adaptation measures related to coastal erosion / tidal / sea floods and siltation (sea level rise, storms, etc.) in line with priorities (in district development plans and confirmed by chiefs): Fuvemeh and Agorkedzi / Dzita / Agbledomi ✓ Main issues: rapid erosion / disappearance community ✓ No appropriate relocation option. ✓ Possible adaptation measures: relocate – use existing pond for fish or related + ecotourism Anloga (Whuti and Lagbati), Woe

 10/04/2019 Keta district communities			✓ Main issues: salt-water intrusion due to coastal erosion, sea level rise and overuse boreholes– dying crops ✓ Possible adaptation measures: Salt resilient crops + rainwater infiltration ponds / recharge groundwater; ecotourism Vodza ✓ Main issues: Coastal flooding into community ✓ Possible adaptation measures: shape the beach with sand already there

Côte d'Ivoire:
In 2019, 12 private meetings with government bodies, and 4 consultations with technical experts were held to discuss the details of the interventions and their operability, management and sustainability. 3 Consultations with communities' representatives.

Type: 12 Private meetings		**Participants**: government bodies and program entities.	
Date	**Stakeholder**	**Consultation objective**	**Conclusion**
 11/04/2019 Abidjan	- UNEP Angele Luh - Resident representative	▪ Identify relevant projects and lessons, concerns and complementary potential ▪ Ensure synergies between projects	✓ No geographic overlap with UNEP project ✓ Compliment GCF project about mangrove ecosystems restoration in Cocody ✓ Cocody Cité verte project; ensure complementarity and no duplication
 11/04/2019 Abidjan	- Ministry of Interior (DGDDL) Mr. Lazare Dago Djahi General secretary	▪ Inform the government of the work developed so far and detail components, agenda of the workshop and field mission and management arrangement ▪ Understand the spatial planning structure and governance in Côte d'Ivoire. Which plans are existing and ongoing initiatives	✓ Project is in line with priorities of government ✓ Project management arrangements (organigram) to be prepared ✓ Component 1: work with Territorial colectivity, Environment Ministry and build capacity at Region and community level; consider development of local plans, Schema Regional Directeur and Agenda 21.
 11/04/2019 Abidjan	- Ministry of construction, housing and Urban Planning (MCLU) Mr Koalla Celestin, Housing Director Mr. Alexandre Kouame General Director of urban planning and land.	▪ Inform the government of the work developed so far and detail components ▪ Align with priorities ministry ▪ Understand the spatial planning structure and governance in Côte d'Ivoire.	✓ Project is in line with priorities of government ✓ Schema Directeur d'Urbanisme du Grand Abidjan is developed and under revision ✓ PUD (Not developed yet in target Communes) ✓ Some communities have developed their *plans de lotissements*
 12/04/2019 Abidjan	- Ministries, Professors, Representatives from target departments, etc	▪ Agree on priority areas project ▪ Agree on content components	✓ Component 1: work with Communities, Ministry of Environment, territorial collectivity (DGDDL), and build capacity at regional level and community level; consider development of local plans / Schema Regional de Grands Ponts, Agenda 21. ✓ Need to Involve BNETD, MINEDD, Ministry of the City, Ministry of Interior under the aegis of National Agency for Coastal Management for Coastal Law in the Schemes of planning ✓ Component 2: involve Municipality chiefs, community chiefs and women and youth (through community groups / association) ✓ Component 3 & 4: Include other vulnerable communities for Jacqueville and Grand Bassam ✓ Component 5: creation of a Excellency centre reuniting different institutions and university, necessity to collaborate with SODEXCAM and CRO for data collection and sharing
 15/04/2019 Abidjan	- UN Women Antonia N'Gabala Sodonon – Resident representative	▪ Identify relevant projects and lessons, concerns and complementary potential ▪ Identify potential project risks and opportunities related to gender and children	✓ No geographic overlap with UN women projects ✓ Youth issue: want to be involved in new/innovative work (incubator business) – poverty leading to prostitution, migration to cities for better opportunities, lack of education for children, child labour. ✓ Gender issue: limited access to land; men control resources and land, migration issues; high rate of prostitution in cities ✓ Youth: use youth groups / associations and focus on 'innovative' work such as ecotourism

			✓ UN Women established partnership with university to implement gender club for open discussion on issues (migration, etc)
 18/04/2019 Abidjan	- UNICEF Mr. Aboubacar Kampo - Resident representative	▪ Identify relevant projects and lessons, concerns and complementary potential ▪ Identify potential project risks and opportunities related to gender and children.	✓ No geographic overlap with UNICEF projects ✓ Children issue: human trafficking due to reduction in fish stock (income) ✓ Child labour issues => forced to work at very early age ✓ HIV is a problem among youth (especially girls) community. ✓ Social housing project initiative in collaboration with Colombian start up *"Conceptos plasticos"* using recycled plastic => to reduce waste pollution and avoid use of natural resources for construction (which is leading to erosion).
 19/04/2019	- Ministries, Professors, Representatives from target departments, NGO, etc	▪ Verify / agree upon proposed adaptation measures ▪ Get inputs on proposed adaptation measures ▪ Agree on way forward	✓ Component 1: work with Communities, Ministry of Environment, territorial collectivity (DGDDL), and build capacity at regional level and community level; consider development of local plans / Schema Regional de Grands Ponts, Agenda 21. ✓ Component 2: involve municipality and traditional chiefs and women and youth (through community groups/association) in the planning process and interventions strategies. ✓ Component 3: See above proposed measures ✓ Component 5: creation of an Excellency centre reuniting different institutions and university, necessity to collaborate with SODEXCAM and CRO for data collection and sharing.
 19/04/2019	- ANDE Mr. Amalan Sylvain - Chef de services EIES Mr. Kouassi Brou N'Gbin - - Sous Directeur des evaluations environnementales et sociales	▪ Understand process to conduct EIAs required by national law	Steps: ✓ Prepare ToR ✓ Validate by ANDE ✓ Conduct Feasibility studies by aggregated consultant/company ✓ Report ✓ Validation by ANDE (2 months process)

Type: 3 Field consultations		**Participants**: districts and communities' representatives (chiefs, youth and women organisations, elderly, fishermen and farmers, etc.)	
Vulnerable groups representation: Four minority ground participated (women, disabled, youth and elderly).			
Date	**Stakeholder**	**Consultation objective**	**Conclusion**
  15/04/2019 Cocody Communities	- Cocody communities - Municipality representatives (Direction Serv. Techniques) - Community representatives (chiefs, women and youth organizations, elderly, fishermen, farmers	▪ Align possible adaptation measures with district and community priorities (2019-2021 development plans) and assess feasibility and data gaps (with Arcadis)	✓ Possible feasible adaptation measures ✓ Main issues: rapid Growth, reclamation of land using waste, sand, ✓ No appropriate drainage system and sewage system. ✓ Flooding, flash floods, lagoon pollution due to waste, loss of livelihood from the lagoon, loss of agriculture land. ✓ Possible adaptation measures: development of plan to control urban growth, buffer zone (with public space or agriculture land) around the lagoon to prevent building use as environmental area. ✓ Waste collection by communities (in collaboration with UNICEF *"conceptos plasticos*" initiative)
  16/04/2019 Grand Bassam communities	- Grand Bassam and Port Bouet communities - Municipality representatives (Direction Serv. Techniques) - Community representatives (chiefs, women and youth organizations, elderly, fishermen, farmers		✓ Possible feasible adaptation measures related to coastal erosion / sea floods, sea level rise, and salination of lagoon, etc. in line with priorities (confirmed by chiefs and municipality): Grand Bassam (Gbamlé, Azzuretti, Quartier France, Moossou): ✓ Main issues: coastal erosion; high waves intensity, flooding due to storms and high waves. Pollution in the lagoon, salinity of lagoon, Limited livelihood options, Deforestation of Mangrove for firewood ✓ Possible adaptation measures: Mangrove planting to regulate water and reduce flooding + livelihood support (fish, crabs, etc), introduce crops for salty environment, Ecotourism, beach sand nourishment for coastal protection Port Bouet ✓ Main issues: Coastal erosion; Flash floods, storms and high waves causing damages on infrastructures. Informal settlements close to the lagoon areas facing flooding. ✓ Possible adaptation measures: given the high degree of erosion; building with nature would not be suitable solutions for this area.

			✓ Development of plan to control urban growth, buffer zone (with public space or agriculture land) around the lagoon to prevent building.
  17/04/2019 Jacqueville communities	- Jacqueville communities - Municipality representatives (Direction Serv. Techniques) - Community representatives (chiefs, women and youth organizations, elderly, fishermen, farmers		✓ Possible feasible adaptation measures related to coastal erosion / sea floods, sea level rise, lagoon floodings and salination of lagoon, etc. in line with priorities (confirmed by chiefs and municipality): Coastal communities (Akrou, Grand Jack, etc) ✓ Main issues: Rapid Coastal erosion, coastal flooding, sea level rise, ✓ Possible adaptation measures: Sand nourishment (shape the beach with sand already there) for coastal protection + ecotourism Lagoon communities (Tabot) ✓ Main issues: low depth of lagoon, salination and pollution of lagoon, use of pesticides for fishing leading to loss of livelihoods, open defection, mangrove deforestation ✓ Possible adaptation measures: Salt resilient crops + fishing/crabs/ ponds, ecotourism, green belt, mangrove planting for livelihood support,

Annex Table 10 Consultations with international technical experts

Type: technical experts' consultation		**Participants:** consultancy agencies and partner organisations	
Date	**Stakeholder**	**Consultation objective**	**Outcomes and Conclusion**
Skype calls + 6 -10 nov 2017	Arcadis	▪ Discuss cooperation options ▪ Identify technical intervention options and feasibility responding to local needs	✓ Arcadis joined the mission to Ghana ✓ They did an assessment in greater Abidjan area with UN-Habitat before ✓ Arcadis proposed possible technical interventions responding to local needs ✓ Conduct assessment together during project development phase ✓ Use proposed technical interventions that are relatively low-cost and focus on livelihood enhancement or protection
Skype calls	Delateres	▪ Discuss cooperation options. ▪ Understand causes of erosion from coastal morphology and dynamics, hydrology of the lagoons and environmental and social impacts of proposed interventions at local and regional scale	✓ They did some of the larger studies in Côte d'Ivoire on sedimentation, including for opening river mouth in Grand Bassam (to be done by Morocco but no funding) ✓ They are interested in working together ✓ Possibly involve them when coastal morphology study is needed
Skype calls	Delta Alliance / Dimi group / Delft university	▪ Discuss cooperation options ▪ Identify main issues and needs in target areas and parallel academic programme	✓ Cooperate with Ghana Delta Wing ✓ Consider cooperating on creating 'urban lab' in both countries ✓ Cooperation with Delta Wing in Ghana ✓ Assist setting-up Delta wing in Côte d'Ivoire
Skype call 29 nov	HKV consultants (in Ghana)	▪ Discuss complementary potential WB (GFDRR group) funded Greater Accra climate change risk mitigation strategy and investment plan ▪ Discuss complementary potential UNDP / Royal Haskoning project community resilient for early warning in Ghana	✓ Great Accra plan focuses on river in Accra ✓ HKV developed risk / hot spot maps for greater Accra region ✓ HKV will be 'Kernadviseur' from Dutch water sector ✓ They will share risk maps and relevant docs ✓ Explore option to work together / build on their work for full proposal

2020 – Project Phase: Feasibility and risks assessments

Ghana

In 2020, 8 group discussions with the community members were held to support the development of feasibility assessments, and environmental and social risks screening and impact assessment in both countries. The objective was to solicit views and concerns of the PAPs about the project interventions. The assessments were developed by accredited consultants, following national and AF requirements (e.g. consultations with all beneficiary groups to identify potential risks and impacts, including specific possible concerns of women and youth).

Annex Table 11 Overview consultations (focused group discussions) during field work 2020.

Type: 8 Field consultations	**Participants**: districts and communities' representatives (chiefs, youth and women organisations, elderly, fishermen and farmers, etc.)
Vulnerable groups representation: Four minority ground participated (women, disabled, youth and elderly).	

Date	Stakeholder	Consultation objective	Conclusion
 28/02/2020 Agbledomi	18 participants Assemblyman, Fishermen, Opinion leaders etc Focal Point: Jasper Agbenator (0548302123)	Ask specific questions on - Land ownership and where there are protected areas, heritage sites, etc. - Challenges and the local context. - Open for community sharing	Questions and issues raised: There is a deity associated with the lagoon. The name is called 'Detor'. Also, there are lagoon associated with deities such as Amekutoe, Vitame and Batɛmɛ. These lagoons used to be overseen by Batɛ clan. Are landowners willing to release land for mangrove restoration programme? ANS: YES, we are willing to give our lands. Land ownership - Land is private and we are ready to give out lands where it is due.
Agorkedzi	11 participants Focal Point: Moses Akorli (0249870973)		Will they nourish the beach for the community? ANS: No, the project will not do that. Heritage sites – Currently, there is not identified heritage site in the community. The deity identified here is called Mama Akorvi Land ownership - Land is private and we are ready to give out lands where it is due.
 13/07/2020 Akplabanya	Fish Smokers Association (119 Participants); Community Members (17 participants) Focal Point: Frederick Labia (0246779145)		Will there be installation of machines or monitoring systems in the community to do anything with regards to coastal erosion? Heritage sites – Currently, there is not identified heritage site in the community. Land ownership - Land is private and we are ready to give out lands where it is due.
 14/07/2020 Atiteti	11 participants Refer to list of participants Focal Point: Agbanavor Raphael (0244044376)		Will the land eventually turn out to be owned by The UN-Habitat/ The DI? ANS: No, The project belongs to the community and so with the CREMA model or approach, the community will be made to manage the project properly Heritage sites – Currently, there is not identified heritage site in the community. The deity so far identified is Nana Akigeli. Land ownership - Land is private and we are ready to give out lands where it is due.
 14/07/202 Dzita	14 participants Focal Point: Agbotadua Ahevi (0244116528) (see above table)		Will there be installation of machines or monitoring systems in the community to do anything with regards to coastal erosion? Heritage sites – There is a shrine in the community called "Vitame" The shrine area is made up of small shrubs mixed tall trees (Neem tree, Grape tree and Efor)
 04/07/2020 Goi	16 participants Stool elder, Chief Fisherman, **Youth,** Focal Point: Nomo Tetteh Ruben Otisepeku (0247266003)		-Will drainage systems be constructed in the community to solve flooding issues around school and library? Will the sea affect the community when we deepen the lagoon Ans: The deepening of the lagoon will rather reduce flooding. Heritage sites – Currently, heritage site in the community close to the lagoon is called "Amalengor".
 28/02/2020 Lagbati/Lashibi	20 participants Focal Point: Mr. Agbota (0240989717)		Meeting commenced with prayer at 9:30 am and self-introduction Will the project give us saline crops to plant? ANS: Yes, this will help solve issue of crop that do not well in salty soils in your area Heritage site – None has been identified in the project area.
 15/07/2020 Whuti	43 members Refer list Focal Point: Joseph Ali (0545165409)		Fear of Crop failure Destruction of agriculture We plead that land-owners around the lagoons should be made to agree to the use of their lands during project implementation Lagoon erosion

Côte d'Ivoire:

In 2020, 6 group discussions with the community members were held to support the development of feasibility assessments, and environmental and social risks screening and impact assessment in both countries. The objective was to solicit views and concerns of the PAPs about the project interventions. The

assessments were developed by accredited consultants, following national and AF requirements (e.g. consultations with all beneficiary groups to identify potential risks and impacts, including specific possible concerns of women and youth). Additionally, 1 private meeting with government and partners was held for ESI discussions.

Type: Expert meeting		**Participants**: government, partner organisations and programmes.	
Date	Stakeholder	**Consultation objective**	**Conclusion**
07/02/2020	AF focal point, Abidjan Convention, technical expert from WABICC, UN-Habitat	▪ Expert group meeting for ESIA to validate final interventions and prepare for field work and consultations.	• With the adequate studies, all interventions are suitable for the target areas both in socio-economic and environmental terms.
Type: Field consultations		**Participants**: districts and communities' representatives (chiefs, youth and women organisations, elderly, fishermen and farmers, etc.)	
Vulnerable groups representation: Four minority ground participated (women, disabled, youth and elderly).			
Date	**Stakeholder**	**Consultation objective**	**Conclusion**
	42 participants. Community members	▪ Public consultation in Grand-Bassam as part of the participatory process of the ESIA. ▪ Validate final interventions.	• 83% of participants were favourable to the project and the interventions. • 11% were favourable but presented some concerns such as high technical capacities needed and compliance with technical standards.
 07/05/2020	36 participants. Community members	▪ Public consultation in Jacqueville as part of the participatory process of the ESIA. ▪ Validate final interventions.	• 87% of participants were favourable to the project and the interventions. • Remaining 13% were favourable but presented some concerns such as ensuring social inclusion and realisation of environmental and social analysis.
 14/05/2020	35 participants. Community members	▪ Workshop for the formalization and launching of the Technical Committee in Grand-Bassam as part of the participatory process of the ESIA.	• All stakeholders have been informed and the technical committee has been established.
 29,30/06/20 and 17/07/2020	150 participants. Community members	▪ Focused group discussions in Grand-Bassam as part of the participatory process of the ESIA. ▪ Discuss the interventions with women and youth.	• Women and youth agree on the relevance interventions have in their communities and vulnerable groups. • They presented some concerns linked to implementation and maintenance that will be integrated for the execution.
 3,4 and 10/07/2020	120 participants. Community members	▪ Focused group discussions in Jacqueville as part of the participatory process of the ESIA. ▪ Discuss the interventions with women and youth.	• Women and youth agree on the relevance interventions have in their communities and vulnerable groups. • They presented some concerns linked to implementation and maintenance that will be integrated for the execution.

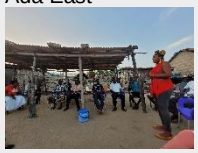
2021 – Project Phase: Full Project Proposal Review and Validation

Ghana

In 2021, and 7 private meetings with government and implementing entities were held to validate the proposal. 11 field consultations were also carried out in December with the objective of validating the pre-selected sites for the project interventions and activities in each community.

Type: 4 Private meetings		**Participants**: government bodies, district representatives and programmes.	
Date	**Stakeholder**	**Consultation objective**	**Conclusion**

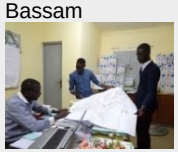
06/12/2021 Accra	- UN-Habitat Local Team of Ghana - Development Institute	▪ Discuss the mission scope ▪ Adjust the agenda of the week ▪ General organization of the community consultation.	✓ Agreement of the agenda of the week and the mission scope.
06/12/2021 Accra	- Ministry of Local Government and Rural Development. Focal Point: Samuel Seth Passah.	▪ Present the new Theory of Change and validate project proposal.	✓ The Ministry is in alignment and happy to start the project implementation.
06/12/2021 Accra	- Wildlife Division from the Forestry Commission (WDFC).	▪ Technical discussion about the interventions and experiences.	✓ Technical discussion on the mangrove projects in Ada, Dredging in Keta, EWS project from Volta River Authority ✓ Mangrove has already been planted 17 years ago as an experimentation. The restored mangrove was successful. There is strong interest in the project.
10/12/2021 	- Ministry of Environment, Science, Technology and Innovation, specifically the Land Use Spatial Planning Authority (LUSPA).	▪ Presentation of the new structure of the project proposal, new theory of change and planning components of the project and the role of LUSPA in the project as Lead Entity of the planning process at sub-regional scale.	✓ LUSPA shared the theory of change, and the project components are aligned with their strategies. ✓ Raised the importance to manage expectations of communities and to advance to start implementation.
07/12/2021 Big Ada, Ada East. 	- Ada East District Assembly	▪ Presentation of the new structure of the proposal to be submitted in January, discussion on the planning component, next steps and the target communities.	✓ Ada East District Assembly agrees with the project for the communities and confirmed there is interest to collaborate with the implementation of the project activities.
08/12/2021 Lagbashi, Anloga 	- Anloga District Assembly		✓ Anloga District Assembly does not have plans been development now; the district is drafting the strategies since its creation (previously part of Keta District). ✓ The project is aligned with the intentions of the District and they want to collaborate in the development and implementation of the outputs.
09/12/2021 Keta, Keta. 	- Keta District Assembly		✓ Keta District was subdivided into Anloga District and Keta District and the project is no longer working in communities of Keta.
Type: 11 Field consultations		**Participants**: districts and communities' representatives (chiefs, youth and women organisations, elderly, fishermen and farmers, etc.)	
Vulnerable groups representation: Four minority ground participated (women, disabled, youth and elderly).			**Gender:** average of women participation was 40%
Date	**Stakeholder**	**Consultation objective**	**Conclusion**
07/12/2021 Wokumagbe, Ada West 	- Main focal points: Community rep/chief: Tsikatah Tetteh Tetteh-Narh Women rep: Eva Osabutey Youth rep: Emmanuel Teye Nguledzi Elderly rep: Rev. Philemon Nii Lomotey Disabled rep: Joyce Nubuor - 14 Community membres participants; 43% Women.	▪ Validate main issues: Erosion, coastal floods, flash floods, dry lagoon in dry season and loss of livelihood in lagoon. ▪ How these climate issues are impacting women, youth, elderly and disabled. ▪ Validate possible adaptation measures: urban flood adaptation projects, mangrove restoration and EWS. ▪ Visit the community and identify the sites of the activities. ▪ How these climate issues are impacting women, youth, elderly and disabled.	✓ Main issues: floods, erosion, sedimentation of the lagoons and water level rise. ✓ During extreme events youth don't go to school; elderly and disabled have to be carried out by community to safe area; women cannot work and loose livelihood. ✓ Strategies the community thinks will help to adapt: urban flood resilience (infiltration cells, channels and biodetention facility), mangrove needs to be restored and EWS is important. ✓ Intervention sites identified: mangrove restoration between community and lagoon; Safe area for EWS in dry land; drainage channels where water runs and infiltration where water accumulates (see map in Annex 3).

07/12/2021 Akplabanya, Ada West 	- Main focal points: Community rep/chief: Tetteh Labia Kamara Women rep: Adayo Paulina Kwao Youth rep: Savior Kitcher Ankra Elderly rep: Jonathan Buenor Disabled rep: Obimpe Charles - 13 Community membres participants; 43% Women.	▪ Validate main issues: Erosion + coastal floods, Flash floods, Dry lagoon in dry season + loss of livelihood in lagoon. ▪ How these climate issues are impacting women, youth, elderly and disabled ▪ Validate possible adaptation measures: urban flood adaptation projects, mangrove restoration and EWS. ▪ Visit the community and identify the sites of the activities.	✓ Main issues: floods, erosion, sedimentation of the lagoons and water level rise. ✓ During extreme events youth don't go to school; elderly and disabled have to be carried out by community to safe area; women cannot work and loose livelihood. ✓ Strategies the community thinks will help to adapt: urban flood resilience (infiltration cells, channels and biodetention facility), mangrove needs to be restored and EWS. ✓ Intervention sites identified: mangrove restoration between community and lagoon where the water level rises strongly; Safe area for EWS in the different dry parts of the community; drainage channels where water runs and where there is space and infiltration where water accumulates (see map in Annex 3).
07/12/2021 Goi, Ada West 	- Main focal points: Community rep/chief: Abraham Soti Ofoyi Women rep: Juliana Kumado Youth rep: Enoch Tei Otipeseku Elderly rep: Joseph Alimo Disabled rep: Peter Abayateye - 15 Community membres participants; 47% Women.	▪ Validate main issues: Erosion + coastal floods, Flash floods, Dry lagoon in dry season + loss of livelihood in lagoon. ▪ How these climate issues are impacting women, youth, elderly and disabled. ▪ Validate possible adaptation measures: urban flood adaptation projects and EWS. ▪ Confirm flooding area, verify if there was mangrove previously. ▪ Visit the community and identify the sites of the activities.	✓ Main issues: floods, erosion, sedimentation of the lagoons and water level rise. ✓ During extreme events youth don't go to school; elderly and disabled have to be carried out by community to safe area; women cannot work and loose livelihood. Some of the get sick (diseases). ✓ Strategies the community thinks will help to adapt: urban flood resilience (infiltration cells and channels), mangrove needs to be restored and EWS is important. ✓ Intervention sites identified: mangrove restoration in two large parts between community and lagoon where the water level rises strongly; Safe area for EWS in the different dry parts of the community; drainage channels towards the lagoon where water runs and infiltration where water accumulates (see map in Annex 3).
07/12/2021 Kewunor-Azizanya, Ada East 	- Main focal points: Community rep/chief: Enoch Nartey Ametepe Women rep: Madugu Nartey Youth rep: Amos Amesimeku Elderly rep: William Mankwa Disabled rep: Alice Atsukpe - 15 Community membres participants; 33% Women.	▪ Validate main issues: flooding, limited livelihood options. ▪ How these climate issues are impacting women, youth, elderly and disabled. ▪ Validate possible adaptation measures: urban flood adaptation projects and EWS. ▪ Visit the community and identify the sites of the activities.	✓ Main issues: floods, sedimentation of the lagoons, water level rise and erosion. ✓ During extreme events youth don't go to school; elderly and disabled have to be carried out by community to safe area; women cannot work and loose livelihood. ✓ Strategies the community thinks will help to adapt: urban flood resilience (infiltration cells and channels), mangrove needs to be restored and EWS is important to be prepared. ✓ Intervention sites identified: mangrove restoration between Volta River and community and between the water points and the community; Safe area for EWS in dry land; drainage channels where water runs to the Volta River and infiltration where water accumulates (see map in Annex 3).
08/12/2021 Agorkedzi, Anloga-Keta 	- Main focal points: Community rep/chief: Agbotadua Festus Women rep: Victoria Dokla Youth rep: Atatsi Patrick Elderly rep: Pilo Detor Disabled rep: Margaret Lumor - 14 Community membres participants; 50% Women.	▪ Validate main issues: flooding, disappearance of community, erosion, no appropriate relocation. ▪ How these climate issues are impacting women, youth, elderly and disabled. ▪ Validate possible adaptation measures: urban flood adaptation projects and EWS. ▪ Visit the community and identify the sites of the activities.	✓ Main issues: floods, sedimentation of the lagoons, water level rise and erosion. ✓ During extreme events youth don't go to school; elderly and disabled have to be carried out by community to safe area; women cannot work and loose livelihood. ✓ Strategies the community thinks will help to adapt: urban flood resilience (infiltration cells and channel), mangrove needs to be restored and EWS is important. ✓ Intervention sites identified: mangrove restoration in the 'back' of the community, between the river-lagoon site and the community; one safe area for EWS in dry land; drainage channels where water runs and infiltration where water accumulates (see map in Annex 3).
08/12/2021 Agbledomi, Anloga-Keta 	- Main focal points Community rep/chief: Godwin Ahedor Women rep: Agnes Vitashie Youth rep: Dagbi Albert Elderly rep: Zoiku John Disabled rep: William Amemelio - 16 Community membres participants; 50% Women.	▪ Validate main issues: rapid erosion, disappearance of community and no appropriate relocation option. ▪ How these climate issues are impacting women, youth, elderly and disabled. ▪ Possible adaptation measure: relocation. ▪ Visit agriculture area and identify main products. Identify water management system and flooding sites. ▪ Visit the community and identify the sites of the activities.	✓ Main issues: floods, droughts, salinization, erosion, sedimentation of the lagoons, water level rise and heatwaves. ✓ During extreme events youth don't go to school; elderly and disabled have to be carried out by community to safe area; there is lack of food, women cannot work and loose livelihood. ✓ Strategies the community thinks will help to adapt: salt resilient agriculture support, urban flood resilience (infiltration cells and channels), mangrove needs to be restored and EWS is important for agriculture. ✓ Intervention sites identified: plot for agriculture; mangrove restoration in the 'front' of the community between lagoon and community; various safe areas for EWS in dry land; drainage channels where water runs (see map in Annex 3).
08/12/2021 Dzita	- Main focal points: Community rep/chief: Agbotadua Ahevi Women rep: Celestine Teku Youth rep: Christian Ganah Elderly rep: Ashitorkor John Disabled rep: Justina Akakpo	▪ Validate main issues: rapid erosion, disappearance of community and no appropriate relocation option. ▪ How climate issues are impacting women, youth, elderly and disabled. Identify main flooding areas. ▪ Check old mangrove restoration project within the community and understand the challenges of old project.	✓ Main issues: floods, droughts, salinization, erosion, sedimentation of the lagoons, water level rise and heatwaves. ✓ During extreme events youth don't go to school; elderly and disabled have to be carried out by community to safe area; there is lack of food, women cannot work and loose livelihood. ✓ Strategies the community thinks will help to adapt: salt resilient agriculture support, urban flood resilience (infiltration cells and channels), mangrove needs to be restored and EWS.

	- 11 Community membres participants ; 45% Women.	▪ Possible adaptation measures: urban flood adaptation measures, mangrove restoration and EWS. ▪ Visit the community and identify the sites of the activities.	✓ Intervention sites identified: plot for agriculture; mangrove restoration between lagoons and community; 3 safe areas for EWS in dry land; drainage channels where water runs and infiltration cells where water accumulates (see map in Annex 3).
08/12/2021 Whuti 	- Main focal points: Community rep/chief: Tetteh Labia Kamara Women rep: Mamavi kulevome Youth rep: Savior Kitcher Ankra Elderly rep: Togbui Adzaho Disabled rep: Obimpe Charles - 17 Community membres participants; 53% Women.	▪ Validate main issues: salt, water intrusion due to coastal erosion, sea level rise and dying crops. Destruction of agriculture, lagoon erosion. ▪ How these climate issues are impacting women, youth, elderly and disabled ▪ Possible adaptation measures: Salt resilient agriculture projects, and rainwater infiltration ponds and EWS. ▪ Visit the community and identify the sites of the activities.	✓ Main issues: floods, droughts, salinization, erosion, sedimentation of the lagoons, water level rise and heatwaves. ✓ During extreme events youth don't go to school; elderly and disabled have to be carried out by community to safe area; there is lack of food, women cannot work and loose livelihood. ✓ Strategies the community thinks will help to adapt: salt resilient agriculture support, urban flood resilience (infiltration cells and channels), mangrove needs to be restored and EWS is important for agriculture. ✓ Intervention sites identified: plot for agriculture; mangrove restoration between the community and the rive-lagoon; 4 safe areas for EWS in dry land; drainage channels where water runs and infiltration cells where water accumulates (see map in Annex 3).
08/12/2021 Lagbati/Lashibi 	- Main focal points: Community rep/chief: Sebuava Samuel Women rep: Ahiable meek Dora Youth rep: Daniel Yador Elderly rep: Emmanuel Tetteh Disabled rep: Afedzi Vincent - 15 Community membres participants; 33% Women.	▪ Validate main issues: salt, water intrusion due to coastal erosion, sea level rise and dying crops. Destruction of agriculture, lagoon erosion. ▪ How climate issues are impacting women, youth, elderly and disabled. ▪ Visit agriculture areas, identify main products and techniques. ▪ Identify flooding area and water management system. ▪ Possible adaptation measures: salt resilient agriculture, urban flood resilience, mangrove restoration and EWS. ▪ Visit the community and identify the sites of the activities.	✓ Main issues: floods in agriculture area, droughts, salinization, erosion, sedimentation of the lagoons, water level rise and heatwaves. ✓ During extreme events there is lack of food and women cannot work and loose livelihood. ✓ Strategies the community thinks will help to adapt: salt resilient agriculture support, mangrove needs to be restored and EWS is important for agriculture. ✓ Intervention sites identified: plot for agriculture; mangrove restoration between agriculture land and Keta Lagoon and EWS for agriculture (see map in Annex 3).
09/12/2021 Woe 	- Main focal points: Community rep/chief: Akpalu Reinhold Women rep: Edekey Mercy Youth rep: Ekuadzi Godwin Elderly rep: Daniel Afordoanyi Disabled rep: Joseph Kwame - 14 Community membres participants; 29% Women.	▪ Validate main issues: high salinity and flooding. ▪ How these climate issues are impacting women, youth, elderly and disabled. ▪ Visit agriculture areas, identify main products and techniques. Verify salinity levels, identify flooding area and water management system. ▪ Possible adaptation measures: Salt resilient agriculture projects, urban flood resilience, restoration and EWS. ▪ Visit the community and identify the sites of the activities.	✓ Main issues: floods in agriculture area, droughts, salinization, erosion, sedimentation of the lagoons, water level rise and heatwaves. ✓ During extreme events there is lack of food in weak harvest season and women cannot work and loose livelihood. ✓ Strategies the community thinks will help to adapt: salt resilient agriculture support, mangrove needs to be restored; and EWS is important for agriculture. ✓ Intervention sites identified: plot for agriculture; mangrove restoration between houses land and Keta Lagoon and EWS for agriculture (see map in Annex 3).
09/12/2021 Tegbi 	- Main focal points: Community rep/chief: Amos Yevu Women rep: Edith Awuye Youth rep: Norvshivi Husunukpe Elderly rep: Robert Anyomi Disabled rep: David Adzika - 14 Community membres participants ; 20% Women.	▪ Validate main issues: flooding, deforestation, salinity levels. ▪ How these climate issues are impacting women, youth, elderly and disabled. ▪ Visit agriculture areas, identify main products and techniques. Verify salinity levels, identify flooding area and water management system. Identify safe area and agriculture plot. ▪ Possible adaptation measures: Salt resilient agriculture projects, urban flood resilience, restoration and EWS. ▪ Visit the community and identify the sites of the activities.	✓ Main issues: floods, droughts, salinization, erosion, sedimentation of the lagoons, water level rise and heatwaves. ✓ During extreme events youth whose houses flood don't go to school; elderly and disabled have to be carried out by community to safe area; there is lack of food in weak harvest season and women cannot work and loose livelihood. ✓ Strategies the community thinks will help to adapt: salt resilient agriculture support, urban flood resilience (infiltration cells and channels), mangrove needs to be restored and EWS. ✓ Intervention sites identified: plot for agriculture; mangrove restoration between houses land and Keta Lagoon, drainage channels and infiltration cells between the houses, and EWS for agriculture (see map in Annex 3).

Côte d'Ivoire

In 2021, 2 private meetings with district assemblies were held in April and 6 in December to validate the proposal. Additionally, 3 field consultations in April and 10 in December (one in each of the targeted communities) were carried out with the objective of validating the pre-selected sites for the project interventions and activities in each community.

Type: 8 Private meetings		**Participants**: government bodies, district representatives and programmes.	
Date	**Stakeholder**	**Consultation objective**	**Conclusion**
16/04/2021 Jacqueville Town Hall 	Mayor, Technical Director and Project Manager/Focal Point – Geomatician) Mayor: Joachim BEUGRE Technical Director: Likes Francis DJETY djetyaimefrancis@gmail.com Project Manager/Focal Point – Geomatician – Romeo N'CHO romeo_ncho2015@outlook.com	▪ Interview with local authorities of Jacqueville Department (Préfecture) to gather information on the local dynamics	✓ The urban and land environment is particularly dynamic in this area where coastal land is the main source of income in the population. ✓ For a long time, Jacqueville has experienced a demographic and economic boom, however it has been exacerbated since 2013 after the bridge connection to Abidjan. Protected areas: ✓ There is a desire to preserve the space but little or no way to enforce a restriction on a protected area. ✓ Like all coastal lands, Jacqueville are subject to significant erosion.
22/04/2021 Grand Bassam 	Mr. Ayemou: Director of the technical department Mr. Brawa Ives Hermann: Assistant - Director of the technical department (0759952031)	▪ Interview with local authorities of Grand Bassam Department (Préfecture) to gather information on the local dynamics	✓ Tourism remains the main source of economy of this city since the colonial period. Adding to cultural and recreational aspects, the religious aspect also attracts tourists to Grand Bassam. ✓ In addition to tourism, fishing is the subsistence activity of the indigenous people of the commune of Grand Bassam, men practicing it preferentially at sea and women on the lagoon. Protected areas: ✓ Buffer zone around Quartier France – an area of 552 HA ✓ In Azuretti, there is also a sacred lake and a sacred mangrove ✓ Soil fragility – Sandy structure that is not very rich and do not favour agriculture activity
13/12/2021 Abidjan 	Ministère de l'Intérieur et de la Sécurité AF Focal Point : Mr. Fojo	▪ Presentation of the new structure of the proposal to be submitted in January, discussion on the planning component, next steps and the target communities. ▪ Presentation of mission agenda and consutlation objectives.	✓ Alignment of the reviewed project with the AF new focal point.
13/12/2021 Abidjan 	Ministère du Plan et du Développement AF Focal Point : Mr. Fojo		✓ Levels of SDFs discussed in relation to the plans the government has development (Grand-Bassam) and the strategies of the government that can be strengthen through the Project. ✓ Project theory of change and outputs is aligned with the government strategies
13/12/2021 Abidjan 	Ministère de l'Environnement et du Développement Durable AF Focal Point : Mr. Fojo		
14/12/2021 Grand-Bassam	Sous-Préfecture de Grand-Bassam	▪ Presentation of the project strategy ▪ Alignment and communication line with community chiefs for consultations	✓ Prefect agrees and is interest in the project ✓ Confirmation with the community chiefs that 1 repreentative of each vulnerable group (women, youth, elderly and disabled) are waiting for us. ✓ Adjusment of agenda (order of communities to visit) in order to accomodate local dynamics (e.g. time that women come back from the market).
15/12/2021 Jacqueville 	Sous-Préfecture de Jacqueville		
17/12/2021 Abidjan	Société d'Exploitation et de Dévelopment Aéroportuaire, Aéronautique et Météorologique - SODEXAM	▪ Presentation of similar projects and discussion of collaboration for the Project to support national govenrment resileince strategies.	Identification of collaboration of the Project components through the: ✓ Plan Nationale d'Adaptation au Changement Climatique : related to agriculture and metorological data. ✓ System d'Alerte Précoce (SAP): conception stage concluded, project with components on coordination and information production at the national scale. The Project can strength the SAP intentions through the implementation at the local level. ✓ Projet d'Assainissement et Résilience Urbaine (PARU): focus on flooding, conception stage. ✓ WACA.

17/12/2021 Abidjan 	Ministère de l'Environnement et du Développement Durable	▪ Debrief, presentation of outcomes of December field consultations and meetings and next steps.	✓ Presentation of outcomes of December field consultations and meetings. ✓ Project proposal aligned with national and local strategies ✓ New AF focal point endorsement
Type: 13 Field consultations		**Participants**: districts and communities' representatives (chiefs, youth and women organisations, elderly, fishermen and farmers, etc.)	
Vulnerable groups representation: Four minority ground participated (women, disabled, youth and elderly).			**Gender:** average of women participation was 40%
Date	**Stakeholder**	**Consultation objective**	**Conclusion**
16/04/2021Attoutou B 	Attoutou B community members (2 participants) Focal Point: Innocent DATCHA BEUGRE (+2250504269279)		Project areas and land allocation: ✓ In Otoutou A, the site is reserved for mangrove rehabilitation, currently is being exploited for pig farming. It also serves as a wild dump. Villagers burned up part of the area to make it accessible to plantations. The village has also a preservation area. ✓ In Taboth, the place for pen culture is preserved, the fishing activity is already in place, especially fisherwomen. There are women guards, with baskets like water tanks, selling fishing products.
16/04/2021 Koko 	Koko community members	▪ Gather specific information on the local dynamics, protected lands, deforestation/mangrove, agriculture and flooding.	✓ In Koko, the mangrove to be rehabilitated has already been set up, as evidenced by a subdivision terminal that was found there.
16/04/2021Taboth 	Taboth Community members		Project areas and land allocation: ✓ Pen culture system and mangrove rehabilitation ✓ Most of the inhabitants live from fishing and we meet on the water's edge, a kind of public square of the village, a group of about ten women who washed the crabs. They are aware of the project to set up aquaculture facilities.
22/04/2021 Azuretti 	- Azuretti Focal point: Essouan Kouassi 0153504540 - Gbamélé Focal point: Beged 07074322525 - Mondoukou Focal point: 0707567981		✓ Azuretti – Pen Culture System ✓ In this village, we met the chief and his notability as well as a group of women from a socio-economic association. ✓ They are all in favour of the project, it would be an alternative for their development and decrease poverty rate. For them, fishing is becoming more and more fruitless because the vessels they are subjected to excessive competition from large fishing vessels.
22/04/2021 Vitre 2 	- Vitré 2 Focal point: KOTCAH Wanga Moise – 0707433452 President of ADEPAV: YOBOU Albert – 0777883757 (association for fishing and agriculture with about forty members)		✓ The population said that they were informed of the project and they participants were favourable to the project and the interventions.
14/12/2021 Mondoukou Grand-Bassam 	- Main focal points: Community rep/chief: Semin Guy Marc Women rep: Rebeca Awa Youth rep: Akow Akoue Joseph Elderly rep: Mahieu Kacakuncine Disabled rep: Amoussou Boareyno - 12 Community membres participants; 24% Women.	▪ Validate main issues: flooding and deforestation. ▪ How climate issues are impacting women, youth, elderly and disabled ▪ Identify flooding areas, safe area and agriculture plot ▪ Visit the community and identify the sites of the activities.	✓ Main issues: High waves intensity, flooding due to storms and sea/ lagoon level rise, warmer temperature, decrease of fish, clandestine fishing (inadequate quantities). ✓ During extreme events there is lack of food, youth don't go to school, women cannot work and loose livelihood, elderly need to be carried out from flooding. ✓ Strategies the community thinks will help to adapt: flood adaptation interventions (infiltration cells and channels), EWS is important for timely rescue and agriculture. ✓ Intervention sites identified: drainage channels where water runs and 2 dry areas for safety (see map in Annex 3).

14/12/2021 Quartier France, Grand-Bassam 	- Main focal points: Community rep/chief: Voiti Samiel Women rep: Kouamelan Allabat Youth rep: Amontchi Elia Elderly rep: Amichia Honouine Disabled rep: Bibe Bognan - 12 Community membres participants; 42% Women.	▪ Validate main issues: pollution in the lagoon, salinity, limited livelihood options, deforestation. ▪ How climate issues are impacting women, youth, elderly and disabled ▪ Identify flooding areas, safe area ▪ Visit the community and identify the sites of the activities.	✓ Main issues: Sea level rise, accumulation of sediments in the lagoon, agriculture in saturated soil and floods. ✓ During extreme events some houses are completely flooded and youth, elderly and women living in these areas are impacted (similar to others). Boats are used for transportation. ✓ Strategies the community thinks will help to adapt: flood adaptation interventions (infiltration cells and channels), mangrove restoration and EWS for timely rescue and agriculture. ✓ Intervention sites identified: drainage channels where water runs, mangrove restoration between lagoon and community, and 3 dry areas and routes for safety(see map in Annex 3).
14/12/2021 Azuretti, Grand-Bassam 	- Main focal points: Community rep/chief: Nanan Nognam V Women rep: Gnuan Kpdé Patnce Youth rep: Akesse Kablan Crepin Elderly rep: Abekaki Akissi Disabled rep: Ebagmenem K. ludovic - 24 Community membres participants; 43% Women	▪ Validate main issues: erosion, salinity, limited livelihood options and deforestation. ▪ How climate issues are impacting women, youth, elderly and disabled. ▪ Identify flooding areas, safe area and deforested areas. ▪ Visit the community and identify the sites of the activities	✓ Main issues: flooding, coastal erosion, pollution, sedimentation of lagoon, lack of employment and education facilities. ✓ During extreme events, youth don't go to school, disabled need support to move, elderly are carried out of the flood by community members and sites where women work are distroyed. ✓ Strategies the community thinks will help to adapt: flood adaptation interventions (infiltration cells and channels), mangrove restoration and EWS is important for timely rescue. ✓ Intervention sites identified: drainage channels towards the Comoé Lagoon and infiltration cells where water accumulates; mangrove between the lagoon and the community and 1 dry areas and routes for safety (see map in Annex 3).
14/12/2021 Vitre 2, Grand-Bassam 	- Main focal points: Community rep/chief: M Christophe Tacki Women rep: Mme Taki Jeannelle Youth rep: Kouami Ake Jean Alain Elderly rep: Kouami Brome Disabled rep: M. Kotcha Vengah M. - 8 Community membres participants; 38% Women.	▪ Validate main issues: flooding. ▪ How climate issues are impacting women, youth, elderly and disabled. ▪ Identify flooding and safe area. ▪ Visit the community and identify the sites of the activities.	✓ Main issues: Lack of drainage system, warmer temperature, decrease of fish, sedimentation, water level rise. ✓ During extreme events, there is lack of food, youth and enderly tend to get sick, disabled need support to move where water is ccumulated and if needed to move to a dry are. There is lack of vegetables and women loose work. ✓ Strategies the community thinks will help to adapt: flood adaptation interventions (infiltration cells and channels), mangrove restoration and EWS for timely rescue and for agriculture. ✓ Intervention sites identified: mangrove between the lagoon and the community, drainage towards the lagoon where water tends to run, infiltration cells in accumulation stops between houses, and 2 dry areas and routes for safety (see map in Annex 3).
15/12/2021 Grand-Jack, Jaqueville 	- Main focal points: Community rep/chief: Lugon Lavitene Women rep: Abikea Simone Youth rep: Egbio Asaza Anché Elderly rep: Ghy Ezqchiel Disabled rep: Kabi Agbo Mabthinal - 10 Community membres participants; 40% Women.	▪ Validate main issues: rapid Coastal erosion, coastal flooding, sea level rise ▪ How climate issues are impacting women, youth, elderly and disabled. ▪ Identify flooding and safe area. ▪ Visit the community and identify the sites of the activities.	✓ Main issues: Lack of drainage system, accumulation of sediments in the sea, floods, change in the rainfall patterns, drought and sea level rise. ✓ During extreme events, youth and enderly tend to get sick, disabled need support to move. ✓ Strategies the community thinks will help to adapt: flood adaptation interventions (infiltration cells and channels) and EWS is important for timely rescue. ✓ Intervention sites identified: drainage towards the coast where water tends to run, infiltration cells between floodable houses, and 2 dry areas and routes for safety (see map in Annex 3).
15/12/2021 Attoutou B, Jaqueville 	- Main focal points: Community rep/chief: Datcha Innocent Women rep: Ksoka Rosabé Youth rep: Atchebi Lovenkin Elderly rep: Aatch Hubert Disabled rep: Becket Madeleine - 33 Community members participants; 45% Women.	▪ Validate main issues: rapid Coastal erosion, coastal flooding, sea level rise ▪ How climate issues are impacting women, youth, elderly and disabled. ▪ Identify flooding and safe area. ▪ Visit the community and identify the sites of the activities.	✓ Main issues: Accumulation of sediments in the lagoon, drought, floods affect agriculture, change in the rainfall patterns and lagoon level rise. ✓ During extreme events, there is a lack of vegetables, women loose work, youth and enderly get sick. ✓ Strategies the community thinks will help to adapt: mangrove restoration to protect from the risen water level, support for resilient agriculture and EWS is important for timely rescue and for agriculture. Urban flood strategies are not needed, mangrove buffer should be enough. ✓ Intervention sites identified: mangrove between the lagoon and the community, and 1 dry area and a plot for agriculture. (see map in Annex 3).
15/12/2021 Koko, Jaqueville 	- Main focal points: Community rep/chief: N´ori Issac Women rep: Asskko Antoinette Youth rep: Lepry Luig Ymmiar Elderly rep: M´Boua Rebecca Disabled rep: N´Guessan Koukran - 27 Community membres participants; 56% Women.	▪ Validate main issues: flooding. ▪ How climate issues are impacting women, youth, elderly and disabled. ▪ Identify flooding and safe area and areas where mangrove existed previously. Visit the community and identify the sites of the activities.	✓ Main issues: flooding, sediment in the lagoon, water level rise, lack of livelihood opportunities. ✓ During extreme events, food production is impacted and women that are mostly working with cassava production are not able to work properly. Elderly and disabled tend to get sick. ✓ Strategies the community thinks will help to adapt: mangrove restoration and EWS. ✓ Intervention sites identified: mangrove between the lagoon and the community, along the coast, and 1 dry area (see map in Annex 3).

16/12/2021 Tiemien, Jaqueville 	- Main focal points: Community rep/chief: N´Giseassian Serge Women rep: Yesso Elise Youth rep: Bouraiman Boubakor Elderly rep: Komia Aui Bakivelery Disabled rep: Almaoujtofu Brouciima - 26 Community membres participants; 27% Women.	▪ Validate main issues: flooding and deforestation. ▪ How climate issues are impacting women, youth, elderly and disabled. ▪ Identify flooding and safe area and areas where mangrove existed previously. Visit the community and identify the sites of the activities.	✓ Main issues: land speculation, decrease of fishing, polluted lagoon, accumulation of sediments in the lagoon, risen temperature, change in the rainfall patterns, drought. ✓ During extreme events, there is a lack of food, women and disabled cannot work properly and youth and elderly tend to get sick. ✓ Strategies the community thinks will help to adapt: mangrove restoration and support for resilient agriculture. ✓ Intervention sites identified: mangrove restoration along the coast (between the lagoon and the community and between the lagoon agriculture land), and a plot for agriculture in the inner part (see map in Annex 3).
16/12/2021 Trefedji, Jaqueville 	- Main focal points: Community rep/chief: Gogo Desnoss Women rep: Beugré Pauline Youth rep: Djiproh M Gonce Elderly rep: Atchô Lea Disabled rep: Adagba Valery - 18 Community membres participants; 44% Women.	▪ Validate main issues: flooding and deforestation. ▪ How climate issues are impacting women, youth, elderly and disabled. ▪ Identify flooding and safe area and areas where mangrove existed previously. Visit the community and identify the sites of the activities.	✓ Main issues: Flooding, lack of sanitation, lack of drainage system, coastal erosion, lagoon level rise, sediment accumulation, erosion. ✓ During extreme events, there is a lack of food, women and disabled cannot work properly and youth and elderly tend to get sick. ✓ Strategies the community thinks will help to adapt: urban flood adaptation(drainage and infiltration cells), mangrove restoration and EWS. ✓ Intervention sites identified: mangrove between the Northwest part of the settlement and the Ebrié Lagoon, drainage towards the dry land where water runs, and 2 dry and safe areas (see map in Annex 3).
16/12/2021 Taboth, Jaqueville 	- Main focal points: Community rep/chief: Gbango Djady Martin Women rep: Sabokour Arce Youth rep: Adiko Eke Pierre Elderly rep: Fuanga Nare Disabled rep: Agbouajouy Martin - 37 Community membres participants; 41% Women.	▪ Validate main issues: low depth, salination and pollution of lagoon, use of pesticides for fishing leading to loss of livelihoods, open defection, mangrove deforestation. ▪ How climate issues are impacting women, youth, elderly and disabled. ▪ Identify deforested, floodable, and safe areas. Visit the community and identify the sites of the activities.	✓ Main issues: flood, erosion, sediment accumularion, soil saturation and salinization, lagoon level rise and lack of fishes. ✓ During extreme events, there is a lack of food, women and disabled cannot work properly and youth and elderly tend to get sick ✓ Strategies the community thinks will help to adapt: mangrove restoration and support for resilient agriculture. ✓ Intervention sites identified: mangrove community and the Ebrié Lagoon and plot for agriculture (see map in Annex 3).

ANNEX 4: GENDER POLICY AND CROSS-CUTTING ISSUES

Cross cutting issues

Marginalised and vulnerable groups assessment

The purpose of this section is to provide an overview and an initial baseline on marginalised and vulnerable groups in the five districts involved in the project. The data was gathered through surveys, local consultations held in the targeted communities, and from official documents collected through desk review, specifically using data from national government.

In general communities have nearly the same number of women and men, and around one third of the inhabitants are youth.

The poverty headcount ration at national poverty line in Ghana was 24.2 in 2010 and Cote D' Ivore was 39,5 in 2020. The main religions in the target areas are Christian (approximately 2/3 of total) and Islam (approximately 1/5 of total). The main ethnic group is Akan (almost 4/5 of total), followed by Krou and Mande du Nord. Within the Akan population there are ethnic sub-groups, including e.g. Adioukrou and Baoule.

Annex Table 12 Initial vulnerable groups baseline

Group	Ada West[98]	Ada East[99]	Anloga/ Keta[100]	Jacqueville[101]	Grand-Bassam[102]
Poverty Rate	3% (G. Accra, 2016)	3% (G. Accra, 2016)	37 (Volta Region, 2016)	30,3%[103]	30,3%[104]
Children and youth rate	42.8% (below 15 years) 12.7% (15-19 years)	54% (below 15 years) 10.7% (15-19 years)	34.6 (below 15 years) 11% (15-19 years)	61,3%	61,3%
Women and girls	51.7%	52.5%	53.6%	24,1%	24,1%
Older persons rate	6.7%	6.5%	12.1%	4%	4%
Indigenous people	NA	Dangme-speaking people	NA	NA	NA
Ethnic groups	Akan (47.5%) Mole-Dagbon (16.6%)			Alladians, Ahizi and Avikam	Abouré and N'Zima
Displaced/ migrant people	NA	NA	NA	12,8%	15,3%
Refugees	NA	NA	NA	NA	NA
Persons with disabilities rate	2.2% (2.3% female and 2.0% male)	4.3% (4.8% female and 3.8% male)	7.2% (8.0% female and 6.3% male)	1%	1%
People living with HIV/ AIDS rate	1.85%[105]	2.90%[106]	1.29%[107]	2,3%[108]	2,6%[109]

Ada West

According to the 2010 Population and Housing Census, the population of Ada West District is 59,124 inhabitants, and about 70% of its population reside in the rural localities. The population 11 year and above, 68.5% are literate. The proportion of literate among men is higher (78.6%) than women (59.5%).

73% of the population aged 15 years and older are economically active and 15.2% are not active and perform household duties. 42.1% are engaged in agriculture, forestry, and fishery activities.

The General Assembly of the Ada West District Assembly is made up of 21 members, comprising two females and 19 males.

Ada East

[98] https://www2.statsghana.gov.gh/docfiles/2010_District_Report/Greater%20Accra/ADA%20WEST.pdf
[99] https://new-ndpc-static1.s3.amazonaws.com/CACHES/PUBLICATIONS/2016/06/06/Ada+East.pdf
[100] https://www2.statsghana.gov.gh/docfiles/2010_District_Report/Volta/KETA%20MUNICIPAL.pdf
[101] Resencement Général de la population et de l'Habitat (RGPH) 2014
[102] Resencement Général de la population et de l'Habitat (RGPH) 2014
[103] Enquete de niveau de vie (ENV) 2015/ Instititut National de la Statistique (INS)
[104] Enquete de niveau de vie (ENV) 2015/ Instititut National de la Statistique (INS)
[105] https://www.ghanaids.gov.gh/mcadmin/Uploads/2019%20FACT%20SHEET%2022%2006%202020%20revised(1).pdf
[106] https://www.ghanaids.gov.gh/mcadmin/Uploads/2019%20FACT%20SHEET%2022%2006%202020%20revised(1).pdf
[107] https://www.ghanaids.gov.gh/mcadmin/Uploads/2019%20FACT%20SHEET%2022%2006%202020%20revised(1).pdf
[108] Rapport annuel sur la situation sanitaire (RASS) 2018/ direction de l'informatique et de l'information sanitaire (DIIS)de Cote d' Ivoire
[109] Rapport annuel sur la situation sanitaire (RASS) 2018/ direction de l'informatique et de l'information sanitaire (DIIS)de Cote d' Ivoire

According to the 2010 Population and Housing Census, the population of Ada East District is 71,671 inhabitants, and 68.3% of its population reside in the rural localities. The population 11 year and above 72.8% are literate. The proportion of literate among men is higher (82.2%) than women (64.8%).

70% of the population aged 15 years and older are economically active, 95% of active population is employed. 15.8% are not active and perform household duties. Of the employed population, about 20.2% are engaged as skilled agricultural, forestry and fishery workers and 39% in service and sales. Most of households are involved in crop farming (83.3%).

Out of 39 currently Assembly member in the General Assembly of the Ada East District, only 4 are women.

Anloga/ Keta

According to the 2010 Population and Housing Census, the population of Keta District is 147,168 inhabitants, representing 7% of the region's total population. About 53.6% of its population reside in urban areas. The population 11 year and above 75.1% are literate. The proportion of literate among men is higher (87%) than women (65.4%). 63.9% of the population aged 15 years and older are economically active, Females (37.0%) are more likely to be economically not active than males (35.0%). About 34.8 percent of the employed population are engaged as skilled agricultural, forestry and fishery workers. The private informal sector is the largest employer in the Municipality, employing 91.1 percent of the population. Most households (67.7%) in the Municipality are engaged in crop farming.

Jacqueville

According to the 2014 Census, the population of Jacqueville District is 32,288 inhabitants[110]. The proportion of men is higher (51,5%) than women (48,4%).

Grand-Bassam

According to the 2014 Census, the population of Jacqueville District is 84,028 inhabitants[111]. The proportion of men is lower (47,8%) than women (52,1%).

Human Rights Approach

The project has been designed focus on people's rights, prioritizing the quality of life and improve conditions and rights. It was adopted and the project will implement a people-centred and human rights approach, promoting a sustainable development. During the project development, the last Human Rights Council Periodic Review "Report of the Working Group on the Universal Periodic Review" for both Countries (Ghana, November 2017 and Côte d'Ivoire, May 2019) and related recommendations for fulfilment of human rights obligations, and the Amnesty International reports for the two Countries.

At all levels, marginalised and vulnerable groups within the targets communities will be prioritised, focus on who are not protected by law and with poor rights. It is crucial their participation in different levels and activities to improve their capacity to cope with climate change stresses and shocks. Mainstreaming the needs of vulnerable and marginalised populations, the project will draw the attention of the national, sub-national and local governments and give space to add their needs in public police. It will also build a political understanding and reinforce their role in the planning processes.

This section presents key challenges on the fulfilment of human rights within both countries and how the components and subprojects contribute to the progressive implementation of the human rights recommendations.

Annex Table 13 Key challenges on the fulfilment of human rights and project components/ subprojects

Component	Design phase	Implementation phase	Human rights related action
1.Improved coordination of local and national governments in the Region to cope with climate change, to integrate major	These initiatives were defined based on the involvement of different stakeholders and aimed at including multi-level governments to be accountable to sure the rights of women, children and youth, older persons, and people with disabilities.	Continuous attention will be given to ensure the expectation of vulnerable and the human rights are fairly addresses. This component will promote inclusive and participatory dialogue, as well stakeholders' discussion and exchange of lessons learned on how climate resilience activities	Support national, regional, and local meetings, training, and cross-fertilization activities for sharing lessons learned and best practices, promoting gender

[110] http://www.ins.ci/templates/docss/RGPH2014D.pdf?_x_tr_sl=fr&_x_tr_tl=en&_x_tr_hl=en&_x_tr_pto=nui,sc&_x_tr_sch=http
[111] http://www.ins.ci/templates/docss/RGPH2014D.pdf?_x_tr_sl=fr&_x_tr_tl=en&_x_tr_hl=en&_x_tr_pto=nui,sc&_x_tr_sch=http

infrastructural projects in their spatial strategies, and to learn from each other to face common transboundary cc-related hazards	The planned activities will equally assess the needs and capacities, as well the self- protection mechanisms of all marginalised groups. A fair opportunity to all different vulnerable groups representation to express their ideas on how to leave no one behind.	can contribute to the Human Right Agenda and its progress.	equality at different levels. The contribution from different level of government on to promote an inclusive, participatory, and integrated approach towards human rights for all.
2. Strengthened role of national adaptation plans in the spatial planning practice at national and sub-national level and improved capacity of governments in adapting to cc	This component was designed considering the right of vulnerable and most excluded groups. They were represented and were informed in the consultation process.	During planning process, continuous attention will be given to ensure the plan meets the expectation of marginalised and vulnerable groups – specifically women, older person, children and youth, persons with disability, etc. The implementation phase will offer opportunities to women to advocate for gender-sensitive policies in climate change decision. It will support country's accountability process on human rights fulfilment.	This component will build a favourable environment for improving the rights of excluded groups, given adequate opportunities to vulnerable groups in decision-making.
3.Municipal staff, communities and local stakeholders have successfully planned and implemented priority sub- projects to cope with climate-change related issues, such as sea level rise and floods, and access to climate-resilient livelihoods	These subprojects have been planned by putting the right of the people to live in a sustainable and safe environment. During the planning, the communities have been consulted. It aims at promoting an accountable environmental protection and improve the rights of the communities to a better quality of life. The environmental resources should also ensure equal access of environmental resources and opportunities to all, including excluded marginalised and vulnerable groups. The cultural and traditional knowledge of local communities was also considered during the planning process.	The implementation phase will ensure equal participation of all vulnerable groups, promoting and building capacity of environmental activities to concrete address causes that act as barriers to their right to safe and adequate living conditions. Traditional and cultural knowledge will be applied. The implementation of the project will ensure a safe space for marginalised populations and include them to discuss and promote a local climate resilience development. The activities will generate skills and job opportunities, particularly for women and youth. Working conditions will be based on ILO labour standards and principles, respecting workers' rights.	The protection and rehabilitation of ecosystem and natural resources will contribute to improve the right to safe, decent and sustainable living condition.

All planed initiatives will contribute to address the human rights challenges in the two countries as reported in the Report of the Working group on the Universal Periodic Review:

Annex Table 14 Human rights challenges identified by countries on the Universal Periodic Review

Countries' recommendations	Component 1	Component 2	Component 3
Ghana			
Continue adopting all the necessary measures to promote human rights in the country;	X	X	X
Ensure a more comprehensive application of initiatives designed to improve the situation of people with disabilities, including the Livelihood Empowerment Against Poverty programme			X
Accede to the ILO Domestic Workers Convention, 2011 (No. 189)			X
Enact the Affirmative Action Bill promoting women in governance and decision-making positions	X	X	
Institute measures to remove existing structural and legislative barriers for women in the labour market		X	X
Continue applying and reinforcing programmes and public policies on inclusion, poverty reduction, equality promotion and non-discrimination, with particular attention to women, children, the elderly and persons with disabilities, among other vulnerable group	X	X	X
Continue strengthening the institutions responsible for the promotion and protection of human rights	X	X	X
Continue promoting economic and social sustainable development in order to lay a solid foundation for the enjoyment of human rights		X	X
Continue strengthening social policy implemented by the Government to tackle the most needy in the country			X
Continue promoting gender equality through specific laws, plans and programmes		X	X
Introduce measures to promote the full and active participation of women in public life	X		
Côte d'Ivoire			
Ensure that existing institutional frameworks are reinforced by integrating climate change into planning and budgeting at the national, regional and local levels	X	X	X
Use the third cycle of the universal periodic review to generate data to support the implementation of the Sustainable Development Goals and human rights	X		
Set up an implementation plan for human rights recommendations that integrates the Sustainable Development Goals and all accepted recommendations	X	X	
Continue mobilizing resources and seek necessary international support for the promotion and protection of human rights	X		
Continue with the practical implementation of the 2016–2020 National Development Plan			X
Increase efforts to raise awareness about sociocultural factors that affect the promotion or protection of the rights of vulnerable groups in society			X
Continue to implement the National Development Plan 2016–2020, strive to eliminate poverty and achieve economic and social sustainable development to lay a solid foundation for its people to enjoy all human rights	X	X	X

Intensify the implementation of poverty-alleviation initiatives that promote the economic empowerment of vulnerable groups, especially women			X
Strengthen measures aimed at protecting vulnerable persons and ensure their full access to natural resources			X
Continue its efforts to tackle unemployment, especially of women, young people and those living in rural areas			X
Continue to strengthen its social programmes in favour of the most vulnerable groups, particularly women and children			X
Ensure the effective integration of women in all sectors of public life	X		
Intensify efforts to increase women's participation in political and public life	X		
Continue to promote women's empowerment	X		
Make efforts to increase the number of women in decision-making roles and positions	X		
Ensure that women, children, persons with disabilities, indigenous and marginalized communities are meaningfully engaged in the development of legislation, policies and programmes on climate change and disaster risk reduction at the local, national and international levels	X	X	X

Initial Gender Assessment

The purpose of this specific 'gender and youth' section is to demonstrate how this project will comply to the AF Gender Policy (GP), drafting up a framework for the design and implementation of a gender focus project. Understanding the different needs and capacities of women and men in both countries is crucial to effective project implementation. The gender assessment was conducted to have an overview of the gender group differences in terms of their vulnerability, roles and responsibilities as well challenged and opportunities, adding on gender mainstream into project activities and identifying a gender-based action plan for the project implementation.

A gender approach and data baseline have been established, which is necessary at the project start against which implementation progress and results can be measured. In line with UN-Habitat's ESSP, the approach includes the identification and of promotion of economic, social and environmental benefits and opportunities for women and youth for each project activity.

During project preparation a 'gender assessment' has been conducted to identify potential project gender equality and women's and youth empowerment issues, but also opportunities and possible gender mainstream actions in the project. The outcomes are summarized below, as well as arrangements that will be taken during project implementation to comply to the AF GP, including to show how the project integrates a gender-responsive implementation and contributes to improving gender equality, the empowerment of women and youth and the project interventions' suitability to meet the adaptation needs of targeted women and men and youth.

Methodology

During the project preparation phase, potential gender equality and women's and youth challenges and opportunities have been identified through initial qualitative and quantitative data analysis / desk research, surveys and focus group discussions with women, youth and other vulnerable groups. The main purpose of these public consultation sessions was to seek the beneficiaries' point of view and to collect data for a better design of the project with focus on vulnerable groups, women and youth. Specific women and youth needs and perceptions were identified, as well as potential gender-related risks and impacts, including possible concerns regarding proposed project activities. This participatory approach aimed at ensuring effective representation of the project beneficiaries during the preparation and planning stages, given the concerns and challenges from different stakeholders. The presence of women in the consultation process provided different perception on the challenges of women in access and income generation activity problems. Although the data collected may not be statistically representative, considering that the unbalance representation was still observed, the qualitative data gathered presents a reliable analysis.

Specific considerations and phases

Determinants for gender-responsive stakeholder consultations

Annex Table 15 Stakeholders consulted to develop gender approach

Type of stakeholder	Specific stakeholder
National government	**Ghana:** Ministry of Environment, Science, Technology and Innovation (MESTI) (UNFCCC gender focal point) **Côte d'Ivoire:** Ministry of Environment and Sustainable Development (UNFCCC gender focal point)
UN agencies	UN Women UNICEF UNDP (Gender and Youth)

Community level	Community consultations and focus group discussions with women and youth in Ghana: Big Ada, Wokumagwe, Aklabanya, Goi, Kewunor, Agorkedzi, Dzita, Agbledomi, Whuti, Woe and in Côte d'Ivoire : Grand-Jack, Azuretti and Mondukou.

*See also Part II.I and Annex 4

Context

At the regional level, Ghana and Côte d'Ivoire are members of the African Union (AU), which has put gender equality on the agenda through its Agenda 2063, its strategy for Gender Equality and Women's Empowerment (GEWE, 2019), its Protocol to the African Charter on Human and Peoples' Rights on the Rights of Women in Africa (2003), and the Solemn Declaration on Gender Equality in Africa (SDGEA, 2004). The AU's Women, Gender and Development Directorate (WGDD) aims to ensure that member states implement the respective policies and strategies, and provides guidance to the country level in this respect. Environment or climate change related topics are integrated into GEWE under the pillar of economic justice and sustainable development, where the strategy document states that "Women are key managers of the environment; bear the brunt of natural disasters and climate change yet are not meaningfully engaged in climate justice initiatives."

In 2010 the AU declared the Decade for Women 2010-2020. Among its objectives is to "identify Women's role in mitigating climate change, as custodians of the environment, making sure they benefit from the new global packages to fight climate change". Adaptation to climate change however is not specifically included.

In addition, Ghana and Côte d'Ivoire are members of ECOWAS. The Supplementary Act on Equality of Rights between Women and Men for Sustainable Development in the ECOWAS Region from 2015 commits all ECOWAS Member states to the promotion of gender equality and equity in all sectors through appropriate policy and legislative formulation and reviews as well as strategy alignment. It includes Article 37 on Environmental Management and Article 38 on Protection against the Negative Impacts of Climate Change.

Main findings of the Gender Assessment

The role of women and vulnerable groups in the climate change context and natural resources management are still limited, even though women are more vulnerable to the effects of climate change than men. Climate change is likely to aggravate the currently disadvantage pattern. This results from the social, economic, and political barriers that impede the active participation of women and vulnerable groups in adaptation and mitigation measures against climate change aggravated by the impacts of droughts in the proposed project sites. Additionally, women and men in rural area in Ghana and Côte d'Ivoire are especially vulnerable since they are highly dependent on local natural resources for their livelihood. Therefore, the unequal access to resources and lack of participation on decision-making process, increase the vulnerability of women affecting disproportionately by climate change effects.

The Gender Assessment aimed at understanding the different and similarities in women and men's vulnerability to climate change and their capacity on adapt and the role on climate change and risk management measures that are incorporated in the project.

For the propose of the following project, some aspects have been selected as crucial in providing an indication on how resilient women are in relation of climate change variability and exposure are to risk. The key aspects provide an overall status of women in both countries and in the target cities. Due to limited official data at city level, some general trends in the countries were applicable to the cities. Additionally, the consultation held in different communities also confirmed these figures. A deeper gender analysis in all communities will be carried out during the implementation of the project.

Ghana

The total population of Ghana is estimated to be 30.42 million (2019) of which 49.32% are women. The population is very young with 57% under the age of 25. 19.3% of women aged 20-24 are married or in a union before age 18 and 5% before 15 years old. Even though the literacy rate among women (79%) is higher than men, the unemployment rate for both genders +15 is around 4.5%. The agriculture of subsistence is prevalence but still the severe food insecurity is still high, being 56.9% among women and 54.4% in male. This implies that their access to land is also very limited.

In February 2021, only 14,6% of seats in parliament were held by women. And 33.8% of female in managerial positions. Overall, women are generally less educated compared to the men. Women and girls aged 10+ spend around 15% of their time on unpaid care and domestic work, compared to 3.5% by men.

Côte d'Ivoire

The total population of Ghana is estimated to be 13.08 million (2019) of which 49.5% are women. The population is very young with 59,4% under the age of 25. 27% of women aged 20-24 are married or in a union before age 18 and 7% before 15 years old. Even though the literacy rate among women (47.2%) is higher than men, the employed population below the international poverty line is 24.1% among women and 19.8% of men.

In February 2021, only 11,4% of seats in parliament were held by women. And 56.9% of female in managerial positions.

Annex Table 16 Analysis of national-level gender-specific legal, cultural / religious and policy context (relevant for this project)

	Analysis of legal status of women	Analysis of cultural/religious status of women	Supporting policies / initiatives
Ghana[112] SIGI 2019 Category: medium SIGI Value 2019: 35 percent **AGEI:** 15 out 52 African countries **CEDAW**: ratified in 1986	Household responsibilities		National Gender Policy (2015) Policy commitments: Improve women's rights and access to justice Improve women's empowerment and livelihoods Improvement to accountable governance structures and women's leadership and participation Improve women's economic justice and interrogate; and Improve gender roles and relations. Responsible ministry: Ministry of Gender, Children and Social Protection
	The Head of Family Accountability Act, 1985 does not prohibit women from becoming the heads of households and across Ghana there is a combination of female-headed and male-headed households	Religious and customary practices and norms may require a woman to obey her husband, but the law does not mandate it nor does the law name legal consequences for her failing to do so.	
	Secure access to land and assets		
	Women and men do not enjoy the same legal rights to land and non-land assets in Ghana (Ghana's Intestate Succession Law 1991; CEDAW Shadow Report, 2014). In some communities, women, namely widows and daughters are still not allowed to inherit land (CEDAW Shadow Report, 2014) therefore making in practice, inequitable ownership and use of land	Succession law is not applied consistently across the country and largely depends on whether one's ethnic group is matrilineal or patrilineal in nature	
	Secure access to formal financial resources		
	Though there is no law that prohibits women from opening a bank account in Ghana, there is a paucity in consumer protection legislation and other policies that guarantee equal access regardless of gender	As a result of limited access to formal financial resources, women continuing to dominate positions in the informal sector, low wage jobs and unpaid labour. This impacts the economic position and stability for women and implies that there are social and cultural gendered stereotypes and expectations associated with what is considered as "women's work".	
	Workplace rights		
	All women are covered under the Labour Act, 2003 (Act 651) and are granted the same rights as men to enter an occupation and profession of their choosing	There are some customary practices that impact the kind of work done by women	
Côte d'Ivoire[113] SIGI 2019 Category: high SIGI Value 2019: 43 percent **AGEI:** 43 out 52 African countries **CEDAW**: ratified in 1995	Household responsibilities		Politique nationale sur l'égalité des chances, l'équité et le genre de Côte d'Ivoire (2009) Does not include a relation between gender and climate change however **Programme d'appui du PNUD à la mise en œuvre des Contributions Déterminées au niveau national (CDN) de la Côte d'Ivoire** – The Programme defines the objective to elaborate a National Gender and Climate Change Strategy and Action Plan; and includes capacity building for national actors so that they are capable to implement. The Programme also aims at including a gender dimension in the communication strategy about the NDC Several initiatives have been implemented to increase women's access to credit by the government, such as a "Women and Development Fund" which facilitates women obtaining credit; or a programme to facilitate access to financial resources at a reduced cost for female entrepreneurs (Republic of Côte d'Ivoire, 2014).
	The law on Marriage, art. 58 & 59 provides women with the same rights as men to be recognised as the head of household	The CEDAW Committee (2011) highlights the persistence of "patriarchal attitudes and deep-rooted stereotypes regarding the roles, responsibilities and identities of women and men in the family and society".	
	Secure access to land and assets		
	Married women do not have the same rights as married men to own, use, make decisions and use as collateral land, property and other non-land assets (Law on Marriage, art. 79 & 81). All goods acquired, inherited or earned during the marriage are considered common goods (Law on Marriage, art. 76), and they are administered by the husband (Law on Marriage, art. 79)	Discriminatory customary practices restricting women's access to land continue to be applied (World Bank, 2013). Women may have to negotiate with their families or their in-laws to be granted the right to use a land plot for subsistence farming (World Bank, 2013). Customary norms regarding access to land vary across the 60 ethnic groups composing Côte d'Ivoire, but women are in general marginalised from making decisions, controlling and acquiring land (FAO, n. d.). According to traditions, no land can be registered in the name of a woman (FAO, n. d.).	
	Secure access to formal financial resources		
	The law provides women with the same rights as men to open a bank account at a formal financial institution (Law on Marriage, art. 66) and to obtain credit (no restriction found).	The CEDAW Committee (2011) notes that despite initiatives aiming at increasing women's access to credit, women still face barriers to obtain credit due notably to their inability to use land as collateral.	
	Workplace rights		
	The Labour Code mandates non-discrimination on the basis of sex in employment and specifically covers hiring, terms and conditions, promotions, training, assignments and termination (art. 4). Additionally, the law mandates equal remuneration for work of equal value (Constitution, art. 14 & 15). However, women are prohibited from entering certain professions; a decree fixes a list of professions prohibited to women (Labour Code, art. 23. 1).	The CEDAW Committee (2011) stresses that working women are concentrated in the informal economy and are thus deprived of their right to social protection. Additionally, there is a pronounced horizontal segregation: women are mostly employed in sectors such as hotel and catering, retail business, cleaning and clothing industry (Republic of Côte d'Ivoire, 2014). Women tend to face barriers in accessing senior positions or decision-making positions in the private and public sector (ICCPR, 2015).	

112 https://www.genderindex.org/wp-content/uploads/files/datasheets/2019/GH.pdf
113 https://www.genderindex.org/wp-content/uploads/files/datasheets/2019/CI.pdf

Differentiated climate change impacts on men and women and their differentiated capacities do adopt to these, gender division of labour and gender-based power structures.

Women are amongst the most vulnerable to the impacts of coastal hazards due to cultural and social rules, norms, structures and other social arrangements that shape and regulate their status in society, and that affect their access to and control over resources and decision making.

In rural areas, women and men depend on biomass, such as agricultural crops, wood, waste and florets resources, for energy and livelihoods. In face of climate change, the ability of rural communities to obtain these resources is reduced. The declining of biodiversity impact the material welfare and livelihoods of people but also cripples access to security, resiliency, health and social relation.

Annex Table 17 Typical socio-economic activities and division of labour in coastal communities in Ghana and Côte d'Ivoire

Women	Men
Rice cultivation along the coast	Fishing
Small-scale agriculture (vegetables) and small animal farming (chicken etc.)	Shrimp farming
Small-scale fishing activities	Livestock production
Fish smoking and drying	Cash crop production
Selling of fish and other sea products	

In addition, women are usually responsible for collecting water and firewood, cooking and taking care of the household. In many context, deforestation has meant that wood is located further away where they live. As a result, women and girls have less time to fulfil their domestic responsibilities, adding one more complexity on having time to earn money, engage on political activities, study, acquire other skills, etc. Moreover, they become more vulnerable to injuries from carrying heavy loads long distance and also face risk of assault and sexual harassment.

Coastal risks and hazards have a number of negative consequences for the population and especially women, such as inadequate access to water and poor water quality, impacting women's primary givers as well the agricultural production due to the increase of overall amount of labour on collecting, protecting and distributing water.

Annex Table 18 Differentiated climate change impacts on men and women

Country	Main sector/ Livelihood relevant to the project	Climate change impact	Gender and youth equality and empowerment issues, incl. specific Vulnerabilities / barriers to adapt	Capacity to adapt and opportunities for promoting a 'women' and 'youth' as agents of change
Ghana	Small scale agriculture	Crop and fisheries loss due to erosion, inundations, salinization and loss of mangroves Reduced water quality Floods may also increase the prevalence of water-related diseases	High dependency on agriculture and fishing sector for income (mostly informal); Limited access land and financing; Youth unemployment	Build upon women and youth organizations; Promote equal participation of men and women in assessment, planning and decision-making Involve traditional leaders ensuring culturally appropriate understanding of 'gender'; Involve women in agriculture and fishing activities
	Small scale fishing			
Côte d'Ivoire	Small scale agriculture			
	Small scale fishing			

Capacity gaps affecting GP compliance

Annex Table 19 Capacity of potential executing entities to carry-out gender responsive activities.

Potential executing entity	Skills and expertise to provide gender mainstreaming inputs	Specific requirements execution entities for compliance	Capacity building needs
LUSPA	Limited (as government entity)	Appoint gender focal point Target women and youth for awareness and capacity building activities Identity specific women and youth needs in roll-out project activities	Awareness on requirements Share guidelines for execution entities to comply and to ensure 'opportunities' are identified and exploited Develop baseline and approach before project start + report
Comp 1 Côte d'Ivoire			

Companies / consultancy firms	Limited (as company)	Where realistic, use quota targets for women and youth participation in project activities Highlight specific gender and youth considerations in knowledge management Have a participatory (women and youth monitoring system)	
Development Institute	Some (as NGO / university)		
NGO in Côte d'Ivoire			
UCC			
Abidjan Convention	Yes (UN core value)		Awareness on requirements Share guidelines for execution entities to comply

Opportunities for promoting a 'women' and 'youth' as agents of change

Through community-level consultations, it was found that women in Ghana and Côte d'Ivoire have considerable knowledge regarding small-scale agriculture (vegetables), Small-scale fishing activities, fish smoking and drying and selling of fish. The project aims to utilizing women's traditional knowledge by targeting women in community level skill building and trainings with a focus to enhance their capacities for applying climate change resilient fishing and agriculture practices. Opportunities include:

- Have women and youth participate in community assessment and planning processes, including monitoring; Assign a specific gender focal point for coastal risk management
- Include women and youth considerations / roles in strategies and plans
- Target and strengthen women and youth organizations
- Women to be involved with O & M
- Women to be involved with cc resilient fishing activities
- Youth to be involved with cc resilient innovative agriculture activities

Project planning and design

Annex Table 20 Gender baseline, goals and activities. A detailed action plan will be developed at inception phase

Project outputs	Disaggregated beneficiaries, gender specific issues and needs / baseline	Key gender goals (to improve equality)	Entry points (to integrate gender considerations / empower women / youth)	Suitable interventions to meet specific needs and built on women and youth skills and knowledge	Additional activities needed to ensure gender perspective, incl. potential risk mitigation measures	Specific 'gender' output Indicator	Specific 'gender' targets	Budget required and allocated
1.1. 1.2. 1.3.	Limited participation women and youth trained and involved in decision making process on climate change adaptation	Women and youth to be involved in decision making process;	Women and youth quota	Involve women and youth groups and have specific gender considerations	Use quota if needed Check women and youth participation in activities	% women and youth participation in tannings, roundtables and events Women and youth considerations in plans	Women: 50 % Youth: 20 % Specific mentioning	A dedicated safeguard compliance staff time is allocated under project execution fees Dedicated AF ESP and GP compliance staff time is allocated under MIE management fee for ROAS These persons will ensure compliance and develop ESP and GP compliance guidelines for execution entities (with support from UN-H HQ)
2.1. 2.2.	Limited participation women and youth and roles are not specified in plans Women and youth should get a chance to be involved in subnational and district planning	Women and youth to be involved in assessment and planning; appoint a gender focal point Involve women and youth in O & M and replication options; Youth to be involved in awareness	Women and / or youth focus point and groups	Involve women and youth groups and have specific gender considerations in plans	Follow-up on selected focal point Check women and youth considerations in plans	Focal point identified % youth participating in awareness campaigns % women and youth participation in assessment and planning Women and youth considerations in plans	Women: 50% Youth: 20 % Specific mentioning	
3.1.	Limited participation women and youth and roles are not specified in plans	Women and youth to be involved in assessment and planning; appoint a gender focal point	Women and youth focus point	Involve women and youth groups and have specific gender considerations in plans	Follow-up on selected focal point Use quota if needed Check women and youth considerations in plans	% women and youth participation in actual assessment and planning, operation and maintenance	Women: 50% Youth: 20 %	
3.2.	High % women and youth - to be involve in managing lagoons	Women managing mangroves around lagoons		Identify preferences through comp 2				
3.3.	High % women and youth - to be involved in EWS operation, data management, communication and training and participating on the evacuation plans	Women to be involved in EWS, data management, communication campaigns and evaluation plans						
3.4.	High % women and youth - to be involve in mangrove nursery and planting	Women managing nursery and crabs production						
3.5.	High % women and youth - to be involve in salt-resilient crops	Women managing salt-resilient crops						
4.1.	High % women and youth – women to be involved in drainage system	Women to manage drainage system						
3.3	Limited involvement women; Women roles and youth are not specified in plans and knowledge management	Women to participate in meetings; Women and youth roles to be identified	Quota / Steering committee; Consider gender and youth issues and needs	Have specific gender considerations in knowledge management	Use quota if needed Check women and youth considerations in plans	Women and youth considerations in plans / KM	Specific mentioning	

Gender Conclusion

In summary, the results show that most part of the communities living in the proposed project sites are vulnerable to climate change aggravated droughts. The most vulnerable members of communities among small scale agriculture and fishing in both countries are women and youth. Gender inequality from historical disadvantages, limited rights, lack of adequate access to resources and limited participation in decision making process make women more vulnerable to climate change. Additionally, the poverty due to unlimited and inadequate livelihood and low-income generation, as well men abandoning their family and heaping to the women all responsibilities, especially in times when climate change and drought events are at the peak.

Regarding job opportunities, most women work in the informal sector, at the labour force in agriculture and fishing sector. Youth have a high rate of unemployment due to the lack of skilled labour.

They have limited access to land and financing mechanisms.

Project implementation

UN-Habitat aims to have a gender responsive and adaptable management approach in place which, when needed, allows adjustment based on learning from earlier decisions and interventions and received feedback. This is done through having gender expertise and focal points in place, whom should identify challenges, barriers or restrictions that arise during project/programme implementation, which might hinder the equal participation of men and women in activities.

Capacities of execution entities will be built so they are able to provide gender mainstreaming inputs and identify any challenges that arise during project/programme implementation, which might hinder the equal participation of men and women in activities. This requires appointing a gender focal point and having quota targets for women and youth participation in project activities. Gender focal points from the government will be part of the steering committees.

The project Grievance mechanism established will be capable to accept grievances and complaints specifically related to gender equality and women's empowerment. All the components of the projects are designed to challenge the gender-based discrimination culture characterising the target countries, districts and communities. All project-related actions aim at abating drought risk through enhancing social resilience. Therefore, the project and subprojects contribute directly or indirectly to mainstreaming gender and ensuring equal opportunities to build resilience though planning process which women’s voices is raising, improving their capacity to adapt to climate change impact on specific subprojects and increasing access to resource.

Component 1 and 2 refer to planning, policy and institutional support on exchange of experience and lessons learned between cities, countries and region. Planned activities under this component will promote the increase of women’s engagement in high-level discussion on climate change and adaptation solutions. Gender mainstreaming in this type of activities is related to participatory process in which women’s inputs must be collected and the data generated from this results bearing the gender approach, promoting gender equity.

Component 3 defined a set of 6 sub-projects that will be implemented in 21 target communities. The subproject aims at develop **community-level plans**, ensuring participation of all communities and vulnerable groups, specifically with the engagement and participation of women and youth. To do so, it is necessary to undertake a gender mainstreaming to guarantee the women and youth perceptions over accessibility, representation and participation and decision-making power. This subproject will offer the opportunities for increasing women’s engagement in climate change discussion and decision-making process.

Gender-based discussion and informed decision will translate into gender-sensitive tools and guidelines for enhancing climate adaptation.

The subproject aiming to **establish early warning system** entail the participation and involvement of at least 60% women. The meaningful participation of women will ensure their role as primary household caregivers on recognising and enhancing risks areas and guide inhabitants to develop evacuation plans, identifying routes and safe areas using a participatory approach. While designing and implementing the system, women and vulnerable groups will be actively involved on training on operation the EWS, addressing their own needs and proposing solutions based on their knowledge and capacity. Means of communication will be reachable and understandable to women, children and elderly.

Regarding subproject focusing on **urban flooding adaptation** will enable women to access important information on conservation and protection of natural disaster and also have their role in adopt climate change mitigation/ adaptation measure to address risks. Women's engagement in ecosystem rehabilitation will also give them the opportunity of take the lead in advocating on sustainable practices and also be better protected from flooding and stagnating water that can generate from water-related diseases.

The subproject promoting **mangrove restoration** will enable women to increase livelihood diversification and improve job opportunities. While developing the implementation plan, the meaningful participation of women will ensure their role and will actively ensure their own needs are property addressed. Equal salaries between male and female workers will be guaranteed.

The subproject dealing with **climate change agriculture** entail the participation of women in access important information and training and to promote their role on ensuring productive agri-food systems, involving women in agriculture land management and urban expansion controlling. Those activities will also support gender responsive on land rights and security equal agriculture land tenure.

The subproject on **training for municipal staff and communities** is committed to provide technical expertise and build capacity on climate change resilience and adaptation measures. This subproject will uphold rights of both women and men as human rights focusing on gender equality and equal treatment for both gender. Access to technical knowledge related to climate change adaptation will raise women's interest and create opportunities. Equal participation of women in trainings will also provide space for women's aggregation, enabling dialogue and promoting space to active participation and involvement in climate change decision making.

Performance Monitoring and Evaluation

The gender responsive management approach includes gender responsive monitoring and evaluation, which is participatory and where 'gender disaggregated data' will be collected and analysed. Key indicators have been identified in Table 30 for each project component to monitor and measure their effective contribution to gender equity and justice. Where possible, women and youth will be encouraged to participate in monitoring activities as well.

Indicators under project component 1 and 2:

- % of women who are actively part of high-level climate resilience decision-making processes and platforms;
- Increased awareness and sensibilization of the need to take gender-informed decisions at different levels regarding urban climate resilience;
- % of urban climate resilience knowledge products, tools, legislation, guidelines and policies at national level that are gender-sensitive; % of women who are satisfied with planning processes;
- Nr of women who are consulted in the planning process.

Indicators under project component 3:

Indicators regarding the early warning system:

- Nr of women who take active part in the design of the EWS and evacuation plan;
- Nr of women who participate in training/ capacity building and participatory workshop and have acquitted planning skills, flood risk areas and evacuation centre and safe routes;
- Nr of gender-sensitive aspects in the design of EWS, division of roles and responsibilities related to early warning system communication and dissemination activities;
- % of women who consider that the EWS respond to their needs and are gender sensitive;
- Nr. of women who works on EWS data management activities;

Indicators regarding climate change agriculture:

- Nr of women who are engaged on salty crops activities;
- Nr of women who take active part in the water infiltration system installation and operation;

Indicators regarding climate change agriculture urban flooding adaptation:

- Nr of women who are engaged on the construction of bioretention and detention facility;
- Nr of women who are part of the drainage channels activities;

Indicators regarding mangrove restoration:

- Nr of women working in the mangrove nursery;
- % of women trained and working in mangrove plantation;
- % of women working on blue carbon technical studies;

Indicators regarding training for municipal staff and communities:

- Nr of women who participate in related training and capacity building activities;
- % of women working in the municipality in environmental sector;
- % of women who lead/ participate in awareness campaigns within targeted communities for promoting sustainable environmental practices to reduce and prevent disaster risks
- % of people in the communities who are aware that women can play a transformative leadership role in climate change adaptation;

Gender/ Youth targets by Output

Overview of disaggregated data (beneficiaries) in target areas.

Annex Table 21 Vulnerable groups targets

		Indicators	Vulnerable targets		Beneficiaries		
			Women	Youth	Direct	Indirect	Total
Outcome 1.1	**1.1 .Improved coordination among governments to adapt to climate change and to implement effective coherent measures for climate change adaptation at regional level**	16 events (8 at regional and 8 at national level).	40%	15%			
Output 1.1.1.	**Output 1.1.1.** Set up **a work plan** with the Abidjan Convention for the initiatives and events to mainstream (live and digitally) lessons learned and to boost capacity to adapt to climate change	1 workplan			Everyone with internet access, specially planners and development professionals		
Output 1.1.2.	**Output 1.1.2. Roundtables** for **regional bodies and national** governments (through the Abidjan Convention platform) to **agree on spatial strategies** for a coordinated implementation of climate change adaptation	16 roundtable (8 at regional and 8 at national level) 16 reports	40%	15%	Everyone with internet access, specially planners and development professionals		
Output 1.1.3.	**Output 1.1.3.** Regional Assessment identifying key **common challenges**, climate-**change hotspots and priority areas** (including trans-boundary issues) and recommendations for climate change adaptation at different scales	2 reports			Everyone with internet access, specially planners and development professionals		

Outcome 1.2	**1.2. Capacity-building events and knowledge sharing trans-boundary activities among the participating countries are discussed and prepared though the Abidjan Convention for: i) sharing among the different countries experience-based adaptation mechanisms for replication; ii) training of national governments; iii) participation to global events; iv) support national governments in including coordinated regional level adaptation measures**	16 events (8 at regional and 8 at national level).					
Output 1.2.1.	**Output 1.2.1. Trainings** for **regional bodies and national** governments (through the Abidjan Convention platform) for increasing **capacity** of the use of data and tools to foresee and manage climate change-related risks and impacts	National: 240 (80/year) District: 240 (80/year)	40%	15%	240	Targer disctricts	
Outcome 1.3	**1.3. Cross-fertilization activities for mainstreaming lessons learned and best practices captured though the implementation of community plans and sub-projects are mainstreamed among local communities in partnership with the Abidjan Convention as regional knowledge management platform**	20 events/ year (10 in Ghana and 10 in CDI)	40%	15%			
Output 1.3.1.	**Output 1.3.1.** Cross-fertilization **events** to mainstream at local level experiences from community plans and implementation of sub-projects all over the region	Meetings Good Practices Guidelines Project video			400	West Africa Governments	
Outcome 2.1	**2.1. Subnational and district/department level spatial development framework**	5 SDFs (3 Ghana and 2 CDI)	40%	15%			
Output 2.1.1.	**Output 2.1.1. Two Sub-national-level Spatial Development Framework**/District level Spatial Development Frameworks: 1 targeting the Volta Delta coastal area (Ghana) and 1 targeting the Grand Pont region (Cote d'Ivoire).	1 plan in Ghana	52%	43%	400	634.458	634.858
		1 plan in CDI	48%	31%			
Output 2.1.2.	**Output 2.1.2.** Local-level Spatial Development Frameworks (Local development plans): two in Ghana targeting Ada East and Anloga-Keta districts, and one in Cote D'Ivoire targeting the department of Jacqueville, with climate change-related coastal risks identified and measures to increase coastal resilience proposed	3 plans (2 Ghana and 1 CDI)	40%	15%	220	275.147	275.367
Outcome 2.2	**2.2. National and sub-national officers trained in urban climate adaptation techniques, motoring approaches, and climate-change-related policy development**	4 (1 at Ministry and 1 District level in Ghana. 1 at Ministry and 1 District level in CDI)	40%	15%			
Output 2.2.1.	**Output 2.2.1.** On-the-job **trainings and workshops to strengthen capacity** of the Ministries of the Environment and Sustainable Development and of Planning and Development and municipalities (Ghana), and of of Land Use Spatial Planning Authority (**LUSPA**) and Municipal District Assemblies (MMDAs) (CdI) to develop, implement, and update spatial development frameworks, to develop, use and update spatial development frameworks	80 (40 Ghana and 40 in CDI)	40%	15%	80	200	280
		20 (10 in Ghana and 10 in CDI)	40%	15%			
Outcome 3.1	**3.1. Community level plans developed in Ghana and Côte d'Ivoire with the purpose to plan, operate, maintain, monitor and sustain/replicate concrete adaptation measures**	Community level workshop: 42 (at least two per community)	>50%	>15%			
Output 3.1.1.	**Output 3.1.1. Community-level plans** (11 in Ghana and 10 Cote d'Ivoire) developed with the purpose to plan, operate, maintain, monitor and sustain/replicate concrete adaptation measures deriving from the subprojects	Plans Ghana: 11	40%	15%	300	121.777	122.077
		Plans CDI: 10	40%	15%	300	30.978	31.278
Outcome 3.2	**3.2. Climate change adaptation subprojects are fully developed with communities and municipalities, including detailed engineering studies, and implemented in the target cities mainly through community involvement as labour-intensive manpower**	21 communities (11 in Ghana and 10 in Côte d'Ivoire).					
Output 3.2.1.	Output 3.2.1 Establishment of EWS	Ghana	40%	15%	14.564	107.543	122.107
		CDI			3.234	28.947	32.180
Output 3.2.2.	Output 3.2.2 Integrated NBS for Urban flood adaptation	Ghana	40%	15%	15.502	23.254	38.756
		CDI			3.435	10.335	13.770
Output 3.2.3.	Output 3.2.3 Mangrove restoration	Ghana	40%	15%	72.818	49.289	122.107
		CDI			12.767	3.474	16.241
Output 3.2.4.	Output 3.2.4 Climate resilient agriculture	Ghana	40%	15%	1.440	720	2.160
		CDI			720	360	1.080
Outcome 3.3	3.3. Municipal staff and community members mobilised, trained and equipped for ensuring the sustainable management and/or maintenance of the implemented priority sub-projects	21 communities targeted					
Output 3.3.1.	**Output 3.3.1. Trainings for Municipal staff and communities targeting sub-projects implementation and/or maintenance**	21 communities targeted 30 people/training (25 community and 5 from government)	40%	15%	630	152.755	153.385

Knowledge Management, Information Sharing and Reporting

UN-Habitat aims to have a gender responsive knowledge management approach in place, where specific gender considerations are highlighted through reporting on the project/programme's commitment to gender equality and women's empowerment in all outreach, communication and information sharing efforts.

ANNEX 5: ESP ANNEX, INCL. ESMP

Content

1. Introduction, including summary description of the project/ programme

1.1. Introduction

Social and environmental policies are essential tools to prevent and / or mitigate undue harm of projects and project activities to people and their environment. In line with the Adaptation Fund's ESP and UN- Habitat's Environmental and Social Safeguard Policy (ESSP), UN-Habitat and partners are required to categorize the risk of the project as a whole and to manage potential risks and impacts.

1.2. Purpose

The purpose of this 'ESP annex' is to demonstrate (in an overview) how this project complies to the AF ESP. The annex shows what potential environmental and social risks and co-benefits and opportunities have been identified per project activity, the potential impacts of the risks and how these will be managed. This proposal and related country-specific ESIA-ESMP and consultation reports are being published on UN-Habitat ROAF website (https://unhabitat.org/environmental-and-social-impact-assessment-esia-for-côte-d'ivoire-under-the-adaptation-fund-project; and https://unhabitat.org/environmental-and-social-management-framework-esmf-for-ghana-under-the-adaptation-fund-project respectively).

1.3. Methodology

To ensure compliance with the AF ESP, all proposed project activities have been screened against the 15 AF principles (i.e. safeguards) to identify potential environmental and social risks and to assess related potential impacts. Where risks have been identified, impact assessments have been conducted and measures to avoid or mitigate risks identified (+ monitoring arrangements.

In particular, given the structure of the project, a general risk screening was undertaken for each of the three components of the project, and then a detailed risk screening was undertaken for outputs under outcome 3.2: the outcome comprising all sub-projects, which imply physical interventions. Thus, planned activities under project Outcome 3.2. may entail more risks than the ones under other outcomes and involve soft activities. The overall **risk screening** (general + detailed one for outcome 3.2) is presented in **section 2 of this annex**. After such risk screening, for all identified risks, a **risk assessment** (defining probability and significance of risk and describing **possible impacts**) was presented by principle under **section 3 of this annex**. Section 4 is core of this annex and presents the ESMP, which recalls the impact assessment and builds on that the mitigation measures and the monitoring measures to address the risks identified through the screening.

The risk screening and the impact assessment were obtained through a combination of: i) desk research undertaken by the team, social experts and environmental experts; ii) meetings and discussions with external experts and representatives from agencies relevant for specific principles (UN Women, ILO, WWF,…); and iii) on-site community surveys and public consultations were used to collect disaggregated data focused on climate change related issues, needs and perceptions of marginalized and vulnerable groups, activity prioritisation and the identification and verification of potential risks and impacts. Other relevant information

regarding consultation processes, gender policy and vulnerable groups, and the detailed description of the subprojects implying physical interventions are presented in annexes 4, 5, and 3 respectively. Once the information was gatherer and the ESMP drafted, findings were subject to public consultations/ disclosure in collaboration with communities and local municipalities (last consultation was conducted in December 2021; details from the consultation process are presented in annex 4).

Besides that, in both Ghana and Côte d'Ivoire accredited consultants prepared country-specific ESIAs, **Details in these reports, as well material from the ESMP (including risks mitigation measures), will be integrated in (sub)project execution plans, including for construction, operation and maintenance**.

An overview / summary of the risk screening and ESMP (most important findings) is presented in section II.L and section III.C of the proposal. All information identified and reported in this annex have been consolidated in the proposal, including in the budget. The completed risks screening sheets for each project activity are available on request.

2. Screening and categorization

2.1. General risk screening

An initial screening and assessment process was carried out to identify and evaluate the environmental and social risks and impacts of proposed activities for the **entire project**. Due to the nature of some of the proposed sub-projects under Components 3 (outcome 3.2), the entire project has been categorised as **Medium Risk / Category B** (See section II,L in the full proposal). Consequently, an ESMP was developed.

According to the Ghana's EIA Regulations, the project has been categorized as "Category B" project as well. An ESIA-ESMP study and report and consultations report have been prepared by an accredited consultant in Ghana. Although impact assessments were not required for all proposed projects under Ghana law, the study considered all project activities to comply to the AF ESP. According to the Côte d'Ivoire EIA Regulations, the project has been categorized as "Category B project as well. An ESIA-ESMP study and report and consultations report have been prepared by an accredited consultant in Côte d'Ivoire. Although impact assessments were not required for all proposed projects under Côte d'Ivoire law, the study considered all project activities to comply to the AF ESP. ESIA have been approved by both governments.

In terms of process, normative, planning and capacity development activities under all components were screened against the 15 AF principles. Table 1 below shows the results of both the screening and ESMP for the three components. More specifically, for the screening part, it is specified whether the risks exist or not, and evidence for existence or non-existence of the risk is presented. When the risk is presents, risk assessment and mitigation measures are proposed, as ESMP, in the following sections of this annex (section 3 and section 4 respectively).

Overall, results from this screening show that potential risks impacts are not considered to be significant, as the project activities were designed to minimise potential risks. Nevertheless, measures will be undertaken to ensure that no environmental or social impacts can occur. General monitoring measures are presented in **Part III, Section C** of the main project document.

Annex Table 22 Overview of project activities' screening results against the 15 AF risk areas / principles. For more details see country-specific ESIA reports

Principle	Component 1: Improved coordination of local and national governments in the Region to cope with climate change, to integrate major infrastructural projects in their spatial strategies, and to learn from each other in order to face common transboundary cc-related hazards. Component 1 comprises 3 outcomes: 1.1. Improved coordination among governments to adapt to climate change and to implement effective coherent measures for climate change adaptation at regional level 1.2. Capacity-building events and knowledge sharing trans-boundary activities among the participating countries are discussed and prepared though the Abidjan Convention for: i) sharing among the different countries experience-based adaptation mechanisms for replication; ii) training of national governments; iii) participation to global events; iv) support national governments in including coordinated regional level adaptation measures 1.3. Cross-fertilization activities for mainstreaming lessons learned and best practices captured though the implementation of community plans and sub-projects are mainstreamed among local communities in partnership with the Abidjan Convention as regional knowledge management platform	Component 2: Strengthened role of national adaptation plans in the spatial planning practice at national and sub-national level and improved capacity of governments in adapting to cc. Component 2 comprises 2 outcomes: 2.1. National and sub-national officers trained in urban climate adaptation techniques, motoring approaches, and climate-change-related policy development 2.2. Sub-national and district/department level spatial development frameworks	Component 3*: Municipal staff, communities and local stakeholders have successfully planned and implemented priority sub- projects to cope with climate-change related issues, such as sea level rise and floods, and access to climate-resilient livelihoods. Component 3 comprises 3 outcomes: 3.1. Community level plans developed in Ghana and Côte d'Ivoire with the purpose to plan, operate, maintain, monitor and sustain/replicate concrete adaptation measures 3.2. Climate change adaptation physical interventions are fully developed with communities and municipalities, including detailed engineering studies, and implemented in the target cities mainly through community involvement as labour-intensive manpower 3.3. Municipal staff and community members mobilised, trained and equipped for ensuring the sustainable management and/or maintenance of the implemented priority sub-projects *component 3 is the only component comprisisng physical intervention (sub-projects under component 3.2. Thus, a more detailed risk screening is this annex, in section 2.2	Overall pre-sence of the RISK within the project
1.Compliance with the Law	Risk: NONE Evidence: all three outcomes constituting this component (outcome 1.1, 1.2 and 1.3) are made of outputs related to coordination meetings, action-plan set up, round-tables and cross-fertilization activities. All the activities under this component occur at Regional level, in collaboration with the Abidjan convention, and involve regional and national institutions. All entities involved represent public authorities and have the mandated to comply with the law. In addition, it is among the mandate of UN-Habitat to comply with national laws and international standards. There are no obstacles to comply to comply with the law. No additional measures.	Risk: NONE Evidence: similarly to component n1, the two outcomes constituting this component (outcome 2.1, and 2.2) involve no physical interventions: they focus on capacity building and spatial planning frameworks. All the activities under this component occur in collaboration with the national governments of the two countries involved, and involve and district level institutions. All entities involved represent public authorities and have the mandated to comply with the law. In addition, it is among the mandate of UN-Habitat to comply with national laws and international standards. There are no obstacles to comply to comply with the law. No additional measures.	Risk: NONE Evidence: outcomes 3.1 and 3.3. of this component focus on community planning and capacity building: they involve no physical interventions and, similarly to outcomes under component 2, are agreed and carried out in collaboration with local authorities. All entities involved represent public authorities and have the mandated to comply with the law. In addition, it is among the mandate of UN-Habitat to comply with national laws and international standards. Outcome 3.2., which imply physical intervention, also do not trigger any risk under this principle (detailed risk screening of all outputs under component 3.2. are presented in is this annex, in section 2.2). Hence, there are no obstacles to comply to comply with the law. No additional measures.	NONE
2.Access and equity	Risk: YES Evidence: Although the project preparation process aims at equally involving all groups representatives, and set up mechanisms to ensure equal participation opportunities to males and man, there can still be a risk of non-equal participation / representation and decision-making during project implementation activities. Thus, mitigation measures are needed to prevent such risk to negatively affect the outputs.	Risk: YES Evidence: Although the project preparation process aims at equally involving all groups representative, and set up mechanisms to ensure equal participation opportunities to males and man, there can still be a risk of non-equal participation to planning activities, and decision-making. Thus, mitigation measures are needed to prevent such risk to negatively affect the outputs.	Risk: YES Evidence: Although the project preparation process has been fully participatory, there can still be a risk of non-equal participation / representation and decision-making during project implementation activities. Thus, mitigation measures are needed to prevent such risk to negatively affect the outputs.	YES
3.Vulnerable and marginalized groups	Risk: YES Evidence: similarly, to what stated under principle 2, due to the usual composition of institutional environments, there is the risk that vulnerable and marginalized groups are not properly represented at higher level. There is a potential risk that the needs of elderly, youth, women, migrants, disabled, … will not be heard. Thus, mitigation measures are needed to prevent such risk to negatively affect the outputs.	Risk: YES Evidence: similarly, to what stated under principle 2, due to the usual composition of institutional environments, there is the risk that vulnerable and marginalized groups are not properly involved and represented during the planning activities, nor included in the capacity building processes. There is a potential risk that the needs of elderly, youth, women, migrants, disabled, … will not be heard. Thus, mitigation measures are needed to prevent such risk to negatively affect the outputs.	Risk: YES Evidence: regarding community plans, as well as subprojects and trainings, in the target communities, women, children/children and elderly and disables represent the most marginalized groups in the target areas. There is a potential risk that the needs of elderly, youth, women, disabled, … will not be heard. Thus, mitigation measures are needed to prevent such risk to negatively affect the outputs.	YES

4.Human rights	Risk: NONE Evidence: it is in the mandate of the UN to ensure that human rights are ensured. All activities have been designed and controlled to support this principle: the project will, in the contrary, increase the quality of life of people and better ensure human rights in the practice. To conclude, compliance with the law (see principle 1) of the countries involved reinforce the compliance with this principle.	Risk: NONE Evidence: it is in the mandate of the UN to ensure that human rights are ensured. All activities have been designed and controlled to support this principle: the project will, in the contrary, increase the quality of life of people and better ensure human rights in the practice. To conclude, compliance with the law (see principle 1) of the countries involved reinforce the compliance with this principle.	Risk: NONE Evidence: it is in the mandate of the UN to ensure that human rights are ensured. All activities have been designed and controlled to support this principle: the project will, in the contrary, increase the quality of life of people and better ensure human rights in the practice. To conclude, compliance with the law (see principle 1) of the countries involved reinforce the compliance with this principle.	NONE
5. Gender equality and women's empowerment	Risk: YES Evidence: activities under this component have to ensure that the voice of women is included and heard. Gender equality is key both in terms of direct participation of women to high level decision-making, and in terms of including their needs and perspectives into decisions. However, unfair access to high level decision-making processes (outcome 1.2), as well as unfair access of women's voice during cross-fertilization activities (outcome 1.3) exists. Thus, mitigation measures are needed to prevent such risk to negatively affect the outputs.	Risk: YES Evidence: risk of unfair access to capacity building activities (outcome 2.1) and planning activities (outcome 2.2.) due to gender issues does exist. Thus, mitigation measures are needed to prevent such risk to negatively affect the outputs. Thus, mitigation measures are needed to prevent such risk to negatively affect the outputs.	Risk: YES Evidence: during consultation for community plans (outcome 3.1), as well as during subprojects preparation and implementation (outcome 3.2) and trainings (outcome 3.3), women might not be considered appropriate or they can be discouraged from applying, due to present social structures (see principle 2 and 3). Thus, mitigation measures are needed to prevent such risk to negatively affect the outputs.	YES
6. Core labour rights	Risk: NO Evidence: There activities occur at Regional level. Consultants and experts being hired (under the three outcomes, to support the activities and prepare the analysis needed) by the executing entities, will be hired in full alignement with international standards, including ILO standards and UN-Habitat principles. Regarding participation to cross-fertilization activities (outcome 1.3) is voluntary and all activities are provided to beneficiaries free of charge. To conclude, no additional measures are required under this component.	Risk: YES Evidence: Participation to capacity-building activities (oucome 2.1) is voluntary and all activities are provided to beneficiaries free of charge. When contracting is required (under component 2.2. for planning activities), national standard clauses will be addressed. For local contracts NOT all the ILO standards and principles are clearly regulated and exercised in the 2 national labour legislations. In particular, fundamental ILO stantards are included in both countries' legislations, but "technical ILO standards" are not. Thus, mitigation measures are needed to prevent such risk to negatively affect the outputs.	Risk: YES Evidence: Regarding training activities (outcome 3.2), they are voluntary and all activities are provided to beneficiaries free of charge. Hence, for this outcome no risk is triggered. However, activities focusing on community plans (outcome 3.1) may trigger this risk similar to planning activities under component 2. Same risk is present under outcome 3.2, for subproject preparation and implementation, as explained in is this annex, in section 2.2. In summary, risk is triggered under outcomes 3.1 and 3.2 as national labour legislations comply with fundamental ILO standards, but none of the two countries comply with all "technical ILO standards", excluding for example the minimum age for hiring labour force. Thus, mitigation measures are needed to prevent such risk to negatively affect the outputs.	YES
7. Indige-nous people	Risk: NONE Evidence: No indigenous people have been identified in target areas. However, at regional level, possible presence of indigenous people will be assessed and map. If present, authorities in charge, together with relevant institutions, have the mandate to ensure that the rights of these people are properly considered during decision-making process.	Risk: NONE Evidence: No indigenous people have been identified in target areas. National governments, district/departments, NGO's, and municipalities have been consulted (see annex 4). No additional measures.	Risk: NONE Evidence: No indigenous people have been identified in target areas. NGO's, Municipalities, communities have been consulted (see annex 4). No additional measures.	NONE
8. Involuntary resettlement	Risk: NONE Evidence: The activities related to this output do not present any risk of resettlement, since they do not imply any physical intervention. No additional measures required.	Risk: NONE Evidence: The activities related to this output do not present any risk of resettlement, since they do not imply any physical intervention. No additional measures required.	Risk: NONE Evidence: The output under outcome 3.1. are meant to comply with local and nationals laws (principle 1) and fundamental human rights (principle 4): they do not present any risk of resettlement. Outputs under outcome 3.2. (subprojects) do not present any risk of involuntary resettlement (for details see is this annex, in section 2.2). Outputs under outcome 3.3. (trainings) do not present any risk of resettlement, since they do not imply any physical intervention. No additional measures required.	NONE
9. Protection of natural habitats	Risk: NONE Evidence: Despite the presence of the critical natural habitats in some of the project areas, the activities related to this component do not present any risk for the natural critical habitats, since they do not imply any physical intervention.	Risk: NONE Evidence: Despite the presence of the critical natural habitats in some of the project areas, the activities related to this component do not present any risk for the natural critical habitats, since they do not imply any physical intervention.	Risk: YES Evidence: Similarly to outcomes under components 1 and 2, outcome 3.1 and 3.3. (community plans and trainings respectively) do not directly involve any physical intervention, so no risk to harm protected/critical habitat is triggered. On the other hand, under component 3.2, subprojects do present potential risk. Thus, even though the activities are meant to restore and protect habitats, interventions under output 3.2.2. may un-intentionally trigger minor risks, based on the origin of the materials needed (sand and gravels). Detailed risk screening of outputs under outcome 3.2. (subprojects) is this annex, in section 2.2.	YES

10. Conserving biodiversity	Risk: NONE Evidence: Despite the presence of the areas considered relevant for biodiversity in some of the project areas, the activities related to this output do not present any risk for the biodiversity, since they do not imply any physical intervention.	Risk: NONE Evidence: Despite the presence of the areas considered relevant for biodiversity in some of the project areas, the activities related to this output do not present any risk for the biodiversity, since they do not imply any physical intervention.	Risk: YES Evidence: Similarly to what stated under principle 9, outcome 3.1 and 3.3. (community plans and trainings respectively) do not directly involve any physical intervention, so no risk to harm protected/critical habitat is triggered. On the other hand, under component 3.2, subprojects do present potential risk. Thus, interventions under output 3.2.2., 3.2.3, and 3.2.4 may un-intentionally trigger minor risks, based on the origin of plants needed for biofilters, mangroves restoration and crops. Detailed risk screening of outputs under outcome 3.2. (subprojects) is presented is this annex, in section 2.2.	YES
11. Climate change	Risk: YES. Evidence: This component of the project do not imply any physical intervention, hence none of the sectors considered key causes of GHG emissions are involved. However, flights and transportation needed for meetings and missions will result in GHG released. Impact must be considered marginal, but mitigation measures need to be designed and put in place.	Risk: YES. Evidence: This component of the project do not imply any physical intervention, hence none of the sectors considered key causes of GHG emissions are involved. However, flights and transportation needed for meetings and missions will result in GHG released. Impact must be considered marginal, but mitigation measures need to be designed and put in place.	Risk: NO According to the IPCC Guidelines for national GHG inventories, relevant sectors to focus on when considering GHG emissions are not involved in the activities comprised by this component. In particular, outcome 3.1 and 3.3. will require minor logistic from community to community, so no major GHG from transport will be triggered. Regarding outcome 3.2, details are present in is this annex, in section 2.2.	YES
12. Pollution and resource efficiency	Risk NONE Evidence: The activities related to this output do not present any risk of overuse of resources or pollution, since they do not imply any physical intervention and no polluting activities are put in place. Similarly, no risk of overuse of energy is put in place. To conclude, the only risk related to this principle is related to GHG emission, already addressed under principle 11. Hence, the only risk under this principle is already described under principle 11.	Risk: NONE Evidence: The activities related to this output do not present any risk of overuse of resources or pollution, since they do not imply any physical intervention and no polluting activities are put in place. Similarly, no risk of overuse of energy is put in place. To conclude, the only risk related to this principle is related to GHG emission, already addressed under principle 11. Hence, the only risk under this principle is already described under principle 11.	Risk: YES Similarly to outcomes under components 1 and 2, outcome 3.1 and 3.3. (community plans and trainings respectively) do not directly involve any physical intervention, so no risk to pollute nor overuse resources is triggered. On the other hand, under component 3.2, subprojects do present potential risk. Detailed risk screening of outputs under outcome 3.2. (subprojects) is presented in is this annex, in section 2.2.	YES
13. Public health	Risk: NONE Evidence: considering the guides for health assessments provided by WHO (www.who.int/hia/evidence/doh/en/index5.htlm, see section 2.2. in this annex), the activities under these outputs have a positive or neutral effect on the determinants of public health. More specifically, activities will have and indirect positive impact on democracy, employment/ education, physical environment, and living habitats. Activities will have neutral impact on financial security, social network, access to health care, and belief in the future. Hence, no risk for public health.	Risk: NONE Evidence: considering the guides for health assessments provided by WHO (www.who.int/hia/evidence/doh/en/index5.htlm, see section 2.2 of this annex), the activities under these outputs have a positive or neutral effect on the determinants of public health. More specifically, activities will have and indirect positive impact on democracy, employment/ education, physical environment, and living habitats. Activities will have neutral impact on financial security, social network, access to health care, and belief in the future. Hence, no risk for public health.	Risk: NONE Evidence: Similarly to outcomes under components 1 and 2, outcome 3.1 and 3.3. (community plans and trainings respectively) do not directly involve any physical intervention, so no risk to harm public health is triggered. Regarding activities under outcome 3.2, the activities do not impact on any of the determinants of health listed by WHO and listed in the table below. On the contrary, subprojects positively contribute to some dimensions of public health. Detailed description of the risk screening per subproject under outcome 3.2. is presented is this annex, in section 2.2.	NONE
14. Physical and cultural heritage	Risk: NONE Evidence: The activities under this component do not present any risk for the heritage, since they do not imply any physical intervention. Hence, no risk.	Risk: NONE Evidence: The activities under this component do not present any risk for the heritage, since they do not imply any physical intervention. Hence, no risk.	Risk: NONE Evidence: Similarly to outcomes under components 1 and 2, outcome 3.1 and 3.3. (community plans and trainings respectively) do not directly involve any physical intervention, so no risk to negatively impact on the cultural heritage is triggered. Regarding outcome 3.2. and its subprojects, no physical and cultural heritage is present within (or in the immediate surroundings) of the project areas. Hence, no risk. Detailed description of the risk screening per subproject under outcome 3.2. is presented in is this annex, in section 2.2.	NONE
15. Land and soil erosion	Risk: NONE Evidence: Despite the presence of the valuable lands or degraded land to presence in some of the project areas, the activities under this component do not present any risk or land degradation and no risk for valuable lands, since they do not imply any physical intervention.	Risk: NONE Evidence: Despite the presence of the valuable lands or degraded land to presence in some of the project areas, the activities under this component do not present any risk or land degradation and no risk for valuable lands, since they do not imply any physical intervention.	Risk: NONE Evidence: Similarly to outcomes under components 1 and 2, outcome 3.1 and 3.3. (community plans and trainings respectively) do not directly involve any physical intervention, so no risk to negatively impact on land an soil erosion is triggered. Regarding outcome 3.2. and its subprojects, there valuable and fragile lands within the project area. However, sub-projects are design for restoring and protecting such land and soil from erosion (for further details see is section 2.2. in this annex.	NONE

2.2. Details and results of the risks screening process for component 3.2.

Annex Table 23 Details and results of the risks screening process for component 3.2.

Outputs/subprojects	AF Environmental and Social principle's potentially triggered
3.2.1. Establishment of EWS	2, 3, 5, 6,
3.2.2. Integrated NBS for urban flood adaptation	2, 3, 5, 6, 9, 10, 12
3.2.3. Mangrove restoration	2, 3, 5, 6, 10
3.2.4. Climate resilient agriculture	2, 3, 5, 6, 10, 12

Principle 1: Compliance with the law

METHOD ADOPTED TO CONDUCT THE RISK SCREENING: All issues relating to compliance with the law have been checked and reported in Part II Section F. For such assessments, legal and regulatory frameworks relevant to each output (including the ones under outcome 3.2 of Component 3) were listed and collected, in collaboration with local authorities, national and international experts. One the collection was completed, possible conflicts between the outputs and the legal and regulatory frameworks were screened, and outputs were reworked to comply.

RESULT: NO, risk is not triggered. **EVIDENCE:** Regarding permissions and EIA, all outputs were duly analysed. EIA for the project were submitted and approved in both Countries. For any further permission that may be required during the implementation phase, all needed steps will be undertaken. It is among the structuring aims of the project to fully comply with the local and national legislations, and to possibly even improve the extent to which international standards are met. In addition, the whole process was initialized and will progress in full collaboration with local authorities, which will guarantee and support compliance with local and national legislations. In general, compliance with relevant legislation is outlined in Part II of the proposal, Section F.

Where risks occur under Principle 6, Core labour rights, and Principle 12, Pollution Prevention and Resource Efficiency, there could be potential for breaches of the law, however those risks are addressed specifically under the respective sections. As far as the project not being in compliance with local or national laws, this has been checked (Part II, Section E) and no further risks and thus actions are identified).

Principle 2: Access and equity

METHOD ADOPTED TO CONDUCT THE RISK SCREENING: Beneficiaries were mapped and consultation occurred for all outputs. During the consultation process with both local authorities and the communities (see annex 4), a risk analysis has been undertaken to assess the provision of: (i) fair and impartial active participation by all groups in all planned activities; (ii) equitable access to benefits from all planned activities, in an inclusive manner that does not impede access to any rights and essential services such as basic health, clean water and sanitation, education, housing, safe and decent working conditions and land rights. The same analysis assessed whether the project exacerbates existing inequities, particularly with respect to marginalised or vulnerable groups. The analysis was carried out through surveys during field missions, collecting information and perceptions from local governments, communities and other stakeholders. In conducting the risk screening surveys, social data and information related to the target communities and vulnerable groups (see Annex 2 and annex 5) was gathered, which served as basis for the assessment. The survey results for Anloga/ Keta, Ada East, Ada West, Grand Bassam, and Jacqueville are presented in Annex 4. **Survey, consultation and validation of the results were undertaken in each community** (see Annex 4).

To understand risks relating to access and equity (and marginalized and vulnerable groups), we must identify that the outputs under Outcome 3.2 Component 3 (representing all physical interventions) provide two different types of adaptation services/benefits; general benefits and targeted benefits. Establishment of EWS (output 3.2.1.), Integrated NBS for urban flood adaptation (output 3.2.2.), and Mangrove restoration (output 3.2.3) provide general benefits – they benefit the people and infrastructures in the communities. Climate resilient agriculture (output 3.2.4), on the other hand, provides targeted benefits, to a pre-defined group of people. For outputs proving targeted benefits, the risk to access and equity (and marginalized and vulnerable groups) is greater.

RESULT: YES, risk does exist. **EVIDENCE:** While assessing equal access to the whole process of the outputs (from the design to the monitoring), it was stated that **for all four outputs**, , if no discrimination in terms of benefits delivering is triggered, there is a **potential risk** to not sufficiently take into consideration the specific needs and/or to not actively involve specific community groups given traditional habits and stereotypes for women, low-educated people, children, and marginal groups in general during the designing phase of the activities. This would be reflected by a lacking representation of vulnerables's needs in the

activities, and by a low participation in awareness-raising activities around ecosystem services, climate change and livelihoods.

While assessing equal access to the benefits (as mentioned in the "method adopted to conduct the risk screening") deriving from the outputs in terms of flood mitigation, outputs **3.2.2., and 3.2.3 (integrated NBS for urban flood adaptation and mangrove restoration)** provide general benefits to the whole population. Higher risks are present in terms of access to training activities **within output 3.2.1 (Establishment of EWS):** children and youth (especially those not attending school) may be excluded from awareness-raising activities, as well as women, elderly and disabled. Regarding **output 3.2.4.,** given its benefitting nature (targeting specific groups) there is a **higher discrimination risk**. Access issues may arise regarding **indirect benefits from Mangrove restoration as well (output 3.2.3)**: thus, while, as state above, flood mitigation promoted by mangrove restoration will equally benefit everybody in the community, fisheries related externalities from the restoration of mangroves could trigger discrimination dynamics and represent a barrier from getting a source of income or livelihoods from fisheries without management or mitigation measures. This may result in community conflict around environmental resources usage (agricultural products and land). Without effective management and mitigation measures, these two activities could lead to preferential access to land and resources for some people if management and/or mitigation measures are not taken. For all four outputs comprised by outcome 3.2. there is a risk during construction and implementation that people will not have complete access to job creation (an indirect benefit deriving from to1he outputs). Risk management and mitigation measures are required to ensure that people have equal access to the design of the activities, to derived job opportunities, and to the direct benefits from the outputs.

WHY RISK COULD NOT BE AVOIDED: the social composition of the target communities makes the risk of non-compliance to the principle a possibility

Principle 3: Marginalized and vulnerable groups

Goal of the principle: avoiding imposing any disproportionate adverse impacts on marginalized and vulnerable groups including children, women and girls, the elderly, indigenous people, tribal groups, displaced people, refugees, people living with disabilities, and people living with HIV/AIDS. In screening any proposed project/programme, the implementing entities shall assess and consider particular impacts on marginalized and vulnerable groups.

METHOD ADOPTED TO CONDUCT THE RISK SCREENING: Beneficiaries were mapped and disaggregated by different vulnerable groups (see annex 5). In addition, consultation occurred for all outputs and was set up in order to have safe environments for marginalized and vulnerable groups to express themselves. During the consultation process with both local authorities and the communities (see annex 4), a risk analysis has been undertaken to: (i) make sure that the marginalised and vulnerable groups are not excluded from any activities as a consequence of lower motivation, weaker social status, sense of disempowerment and/or lack of skills or knowledge; (ii) to take into consideration their needs/perceptions; and (ii) to avoid imposing any disproportionate adverse impacts on marginalised and vulnerable groups especially children, women and girls, older persons, indigenous people, tribal groups, displaced people, refugees, persons with disabilities, and people living with HIV/AIDS or other vulnerable groups. In conducting the risk screening survey, social data and information related to the target communities and, in particular, the vulnerable and marginalised groups within each community (see Annex 5) was gathered, which served as a basis for the assessment. **Survey, consultation and validation of the results were undertaken in each community** (see Annex 4).

RESULT: YES, risk does exist. **EVIDENCE:** Consultations with local government have repeatedly indicated that there are no migrants in the communities: people coming from outside the communities, have been naturalized. All target areas have a high poverty rate, and those below the poverty line can be considered a marginalised and vulnerable group. One sub-set of poor people coincides with single mothers/female heads of families.

Similarly to "principle 2", assessing the involvement of marginalized and vulnerable groups (women, poor, children, disabled, …) in the whole process of the outputs (from the design to the monitoring), it was stated that **for all four outputs**, , if no discrimination in terms of benefits delivering is triggered, there is a **potential risk** to not sufficiently take into consideration the specific needs and/or to not actively involve specific community groups given traditional habits and stereotypes for women, low-educated people, children, and marginal groups in general during the designing phase of the activities. This would be reflected by a lacking representation of marginalized and vulnerables's needs in the **activities,** and by a low participation in awareness-raising activities around ecosystem services, climate change and livelihoods. Another dimension of risk in the process is related to a non-equal access to the job-creation being triggered by all outputs during

the implementation phase: thus, vulnerable may be exclude through traditional discrimination dynamics. Focusing on the **benefits** deriving from the outputs, higher risks are present in terms of access to training activities **within output 3.2.1 (Establishment of EWS):** children and youth (especially those not attending school) may be excluded from awareness-raising activities, as well as women, elderly and disabled. Considering the high poverty rate, the proposal considers the poor to be a marginalised and vulnerable group. If we assumed that people are marginalised and vulnerable because they are discriminated against or excluded, then **risk arises outputs 3.2.3 .and 3.2.4.** Thus, for Mangrove restoration and Climate resilient agriculture, poverty could be a source of discrimination (and represent a barrier from getting a source of income or livelihoods from fisheries in the mangrove systems or agricultural activities) without management or mitigation measures. To conclude, power relations between local communties' members being hired for implementing some outputs' activities and vulnerable youth, especially young women, may result in social tensions.

WHY RISK COULD NOT BE AVOIDED: given the exiting dynamics and the social composition of the target communities, the risk of non-compliance to the principle is a possibility. However, measures to manage the risk are presented in table 5.

Principle 4: Human rights

METHOD ADOPTED TO CONDUCT THE RISK SCREENING: During consultation and through the guidance of a social expert in the proposal writing, a risk screening was undertaken to assess possible violations of human rights or the raising of human rights issues during sub-projects' implementation. The Human Rights Council special procedures in each target country have been analysed (see Annex 5).

RESULT: NO, risk does not exist. **EVIDENCE:** The screening of Human Rights special procedures and the screening through consultation and site visits resulted in no risks of human rights violation or related issues. On the contrary, their implementation represents an opportunity for promoting and advocating the full respect of human rights of all community members. In conducting the risk screening surveys, social data, information and perceptions related to the exercise of the human rights in the target communities and for the vulnerable and marginalised groups was gathered and analysed (see principle 3). Survey results for the 5 sites (3 in Ghana and 2 in Côte d'Ivoire) are presented in Annex 5. The human rights considerations relating to land and involuntary resettlement are analysed under the involuntary resettlement principle -below in this annex-. However, none of these outputs, which require physical activities, will trigger any risk of land property or involuntary resettlement: no land-use will be modified.

Annex Table 24 **Of the 18 Human Rights Treaties, Ghana has ratified 11 ones. Ratification Status Declaration_Côte d'Ivoire (OHCHR)**

International Convention on the Elimination of All Forms of Racial Discrimination :1753	Signature: NA, Ratification/Accession: 1973
International Covenant on Civil and Political Rights :1753	Signature: NA, Ratification/Accession: 1992
Optional Protocol to the International Covenant on Civil and Political Rights :1753	Signature: NA, Ratification/Accession: 1997
Second Optional Protocol to the International Covenant on Civil and Political Rights, aiming at the abolition of the death penalty :1753	Signature: NA, Ratification/Accession: NA
International Covenant on Economic, Social and Cultural Rights :1753	Signature: NA, Ratification/Accession: 1992
Optional Protocol to the International Covenant on Economic, Social and Cultural Rights :1753	Signature: NA, Ratification/Accession: NA
Convention on the Elimination of All Forms of Discrimination against Women :1753	Signature: 1980, Ratification/Accession: 1995
Optional Protocol to the Convention on the Elimination of All Forms of Discrimination against Women :1753	Signature: NA, Ratification/Accession: 2012
Convention against Torture and Other Cruel, Inhuman or Degrading Treatment or Punishment :1753	Signature: NA, Ratification/Accession: 1995
Optional Protocol to the Convention against Torture and Other Cruel, Inhuman or Degrading Treatment or Punishment :1753	Signature: NA, Ratification/Accession: NA
Convention on the Rights of the Child :1753	Signature: 1990, Ratification/Accession: 1991
Optional Protocol to the Convention on the Rights of the Child on the involvement of children in armed conflict :1753	Signature: NA, Ratification/Accession: 2012
Optional Protocol to the Convention on the Rights of the Child on the sale of children, child prostitution and child pornography :1753	Signature: NA, Ratification/Accession: 2011
Optional Protocol to the Convention on the Rights of the Child on a communications procedure :1753	Signature: 2013, Ratification/Accession: NA
International Convention on the Protection of the Rights of All Migrant Workers and Members of their Families :1753	Signature: NA, Ratification/Accession: NA
International Convention for the Protection of all Persons from Enforced Disappearance :1753	Signature: NA, Ratification/Accession: NA
Convention on the Rights of Persons with Disabilities :1753	Signature: 2007, Ratification/Accession: 2014
Optional Protocol to the Convention on the Rights of Persons with Disabilities :1753	Signature: 2007, Ratification/Accession: NA

Annex Table 25 Of the 18 Human Rights Treaties, Ghana has ratified 13 ones. Ratification Status Declaration_Ghana (OHCHR)

International Convention on the Elimination of All Forms of Racial Discrimination :1753	Signature: 1966, Ratification/Accession: 1966
International Covenant on Civil and Political Rights :1753	Signature: 2000, Ratification/Accession: 2000
Optional Protocol to the International Covenant on Civil and Political Rights :1753	Signature: 2000, Ratification/Accession: 2000
Second Optional Protocol to the International Covenant on Civil and Political Rights, aiming at the abolition of the death penalty :1753	Signature: NA, Ratification/Accession: NA
International Covenant on Economic, Social and Cultural Rights :1753	Signature: 2000, Ratification/Accession: 2000
Optional Protocol to the International Covenant on Economic, Social and Cultural Rights :1753	Signature: 2009, Ratification/Accession: NA
Convention on the Elimination of All Forms of Discrimination against Women :1753	Signature: 1980, Ratification/Accession: 1986
Optional Protocol to the Convention on the Elimination of All Forms of Discrimination against Women :1753	Signature: 2000, Ratification/Accession: 2011

Convention against Torture and Other Cruel, Inhuman or Degrading Treatment or Punishment :1753	Signature: 2000, Ratification/Accession: 2000
Optional Protocol to the Convention against Torture and Other Cruel, Inhuman or Degrading Treatment or Punishment :1753	Signature: 2006, Ratification/Accession: 2016
Convention on the Rights of the Child :1753	Signature: 1990, Ratification/Accession: 1990
Optional Protocol to the Convention on the Rights of the Child on the involvement of children in armed conflict :1753	Signature: 2003, Ratification/Accession: 2014
Optional Protocol to the Convention on the Rights of the Child on the sale of children, child prostitution and child pornography :1753	Signature: 2003, Ratification/Accession: NA
Optional Protocol to the Convention on the Rights of the Child on a communications procedure :1753	Signature: 2013, Ratification/Accession: NA
International Convention on the Protection of the Rights of All Migrant Workers and Members of their Families :1753	Signature: 2000, Ratification/Accession: 2000
International Convention for the Protection of all Persons from Enforced Disappearance :1753	Signature: 2007, Ratification/Accession: NA
Convention on the Rights of Persons with Disabilities :1753	Signature: 2007, Ratification/Accession: 2012
Optional Protocol to the Convention on the Rights of Persons with Disabilities :1753	Signature: 2007, Ratification/Accession: 2012

Source: https://indicators.ohchr.org/

Principle 5: Gender equality and women's empowerment

METHOD ADOPTED TO CONDUCT THE RISK SCREENING: a gender-sensitive risk screening was undertaken on site by the team (for each community) to make sure that: (i) both women and men have equal opportunities to participate in the different activities; (ii) both women and men equally benefit from the outputs and outcomes of the different initiatives, and women are not disproportionately affected; and (iii) the initiatives do not maintain or exacerbate existing gender inequalities and, on the contrary, represent an opportunity for women's empowerment (see Annex 5). Results from the screening were discussed and validated with communities and local authorities (see annex 4). Experts from UN-Women were also consulted.

RESULT: YES, risk does exist. **EVIDENCE:** There is evidence that in both Countries (and all 5 locations that communities belong to) women are more vulnerable to climate change and have generally worse socio-economic development outcomes. During floods, for example, women are disproportionately affected, being more likely to be at home when floods hit, having greater responsibility for caring for children and the elderly and less capacity to migrate. Regarding women's involvement in all activities related to the four outputs (from preparation and design, to implementation and monitoring, there is a possible risk that women's opinions may not be considered sufficiently relevant in the design of these interventions. Furthermore, given their perceived role and status, they may not be encouraged to participate in awareness-raising activities and to apply for job opportunities related to the maintenance of the outputs. The implementation of the activities may reinforce existing discriminatory practices against women due to their perceived status, role and traditionally unbalanced gender dynamics. This may result in: (i) women not being consulted; (ii) difficulty in taking part in mangroves plantation and maintenance related works; and (iii) not fully benefitting from the outcomes of the activities (fishing/sustainable mangroves management and alternatives livelihood). Ultimately, this would reinforce women's disempowerment.

Regarding **direct benefits** deriving from activities, all outputs are designed in order to equally benefit men and women. More specifically, benefits for outputs 3.2.2. (Integrated NBS for flood adaptation), 3.2.3 (Mangrove restoration) in terms of adaptation and response to hazards, and floods in particular, reach all the population without specific target. On the other hand, output 3.2.1 (Establishment of EWS) comprises training activities from which women (especially single mothers) may be excluded in not carefully designed in terms of time of the day. Output 3.2.4. (Climate resilience agriculture) provides targeted benefits to people, where there is a process of selecting beneficiaries beyond people who live in a vulnerable area. Similarly, indirect benefits from output 3.2.3. (Mangrove restoration) such as the provisioning of fisheries within the mangrove environments and the support to fishery-related activities target specific groups of the community. Without management and mitigation, outputs' benefits-wise, there are risks of discrimination against women in these two outputs. More information about the research and assumptions underpinning gender equality and women's empowerment can be found in the gender policy annex (Annex 5).

WHY RISK COULD NOT BE AVOIDED: given the exiting dynamics and the social composition of the target communities, the risk of non-compliance to the principle is a possibility. However, measures to manage the risk are presented in table 5.

Principle 6: Core labour rights

METHOD ADOPTED TO CONDUCT THE RISK SCREENING: a risk screening was undertaken by the team, in collaboration with national consultants: (i) to assess the labour laws of each country and evaluate if the minimum ILO standards are reflected; and (ii) to make sure that that minimum ILO standards are taken into account during implementation of the planned activities, as appropriate. Hence, compliance of countries to the ILO Conventions on the fundamental principles and rights at work has been analysed and assessed against the national legislation. Further details about Core Labour rights and National Technical Standards are described in section II.F of the full proposal.

RESULT: YES, risk does exist. **EVIDENCE:** Both Ghana and Côte d'Ivoire ratified all 8 fundamental ILO standards (see https://www.ilo.org/dyn/normlex/en/f?p=1000:11001). These means that national labour legislations comply with fundamental ILO standards. However, none of the two countries comply with all "technical ILO standards", excluding for example the minimum age for hiring labour force. This means that, even complying with national legislations, risks can arise in this process through the potential for exploitative practices, such as hiring school-age children, hiring people on insecure contracts, paying below the minimum wage, discrimination against women or unsafe working conditions. During the implementation phase, the initiatives entail intensive labour which not require specific technical skills. To promote some job creation and capacity building, local people will be hired. Consequently, contracts will be established in the two countries. Since the above-referred national labour laws do not clearly regulate and enforce the ILO standards and principles -especially those related to social security and occupational safety and health- it may result in unfair treatment concerning compensation (living wage), gender equity, health and security standards in relation to dangerous and unhealthy work.

More specifically, during the implementation phase the project will use some community labour to do unskilled construction/plantation related tasks (for the four outputs, 3.2.1., 3.2.2., 3.2.3, 3.2.4), in accordance with UN-Habitat's proven People's Process approach and some specialist hired (i.e. non-community) labour. In particular, output 3.2.2. -Integrated NBS for urban flood adaptation- and output 3.2.3. -mangrove restoration- will require around 70-80 people hired respectively for several weeks or more. Once the outputs will be implemented, only output 3.2.3. (mangrove restoration) and 3.2.4. (Climate resilient agriculture) will create proper job opportunities. However, for climate resilient agriculture no-body will be hired: people will keep working their land. For mangrove restoration (output 3.2.23), only people taking care of the nursery will be hired after the implementation phase. To conclude, output 3.2.1 (Establishment of EWS) will train people to deal with EWS, but will not hire them or create contracts. Contracts may be set up by local municipalities a communities to hire the trained people. Hence, contracts will mainly involve the implementation phase and the risk is small. However, UN-Habitat will legally oblige (through Agreements of Cooperation) its executing partners to uphold international labour standards, and both countries have ratified and transposed into law all eight fundamental conventions of the International Labour Organisation.

WHY RISK COULD NOT BE AVOIDED: national labour laws do not clearly integrate some of the ILO core principles (technical standards) and rights. Hence there is a potential risk of non-compliance with this principle.

Principle 7: Indigenous people

METHOD ADOPTED TO CONDUCT THE RISK SCREENING: an assessment was undertaken to determine whether the planned activities under the four outputs bear any risk in relation to indigenous peoples as in the UN Declaration on the Rights of Indigenous Peoples and other applicable international instruments related to indigenous peoples. Through the risk screening, the presence of indigenous people was checked (see annex 5).

RESULT: NO, risk does not exist. **EVIDENCE:** There are no indigenous people in the project area, as evidenced by the census and reinforced through numerous consultations with both communities and local authorities (who are responsible for registering births). Hence, no further assessment is required to demonstrate compliance.

Principle 8: Involuntary resettlement

METHOD ADOPTED TO CONDUCT THE RISK SCREENING: the project team has repeatedly visited all target sites, most recently in December 2021 (see Part II, Section I). The risk screening was conducted through local consultations, field missions, expert interviews and mapping of the areas of intervention against the location of households and socio-economic activities. In addition, location of all physical activities has been discussed with local communities and located in areas that no one lives, not economic activities take place.

RESULT: NO, risk does not exist. **EVIDENCE:** Establishment of EWS (output 3.2.1.) will not imply the construction of any infrastructure or building: on the contrary, the evacuation routes will be selected among existing routes. Integrated NBS for urban flood adaptation (output 3.2.2.), will only improve drainage channels in the settlements, and improve the discharge of drainage in the lagoon: along the lagoon, in the determined sites, no house nor economic activity/service exist. Mangrove restoration (output 3.2.3) and Climate resilient agriculture (output 3.2.4) will occur were mangroves and agricultural activities already occur: they will only support activities. The only "building" being build will be the "nurseries" for mangroves, under output 3.2.3: consultation and site visits were organized to identify location in vacant plots, in order not to require any resettlement. It resulted that none of the planned activities in the different outputs will determine involuntary resettlement as such. Nevertheless, participatory planning and constant involvement of the local residents in

decision-making, through regular consultations and by ensuring that grievance mechanisms work well, will minimize any potential negative impact and/or difficulty caused by the planned sub-projects' activities. Consultations and participatory planning sessions will be organized with the potentially affected community groups under the leadership of the local authorities. Therefore, this cannot be considered a case of involuntary resettlement. No further assessment required for compliance.

Principle 9: Protection of Natural Habitats.

METHOD ADOPTED TO CONDUCT THE RISK SCREENING: Presence of protected areas at international, national or local level was assessed through among a set of sources and database, such as: UNESCO Man and the Biosphere programme, the IUCN website, Environmental Ministries in the four countries, departments in charge of the environment at local level and any environment-related stakeholder (NGO, universities, …) in the five sites (Ada East, Ada West, Anloga/ Keta, Jacqueville and Gran Bassam). The information was cross-checked through community consultation. Based on the definition of critical natural habitat of the Convention of Biological Diversity, some risks were identified, and some critical natural habitats may be harmed. Below, more specifically, possible risks are identified per subproject.

RESULT: YES, risk does exist. **EVIDENCE:** According to the IUCN red list, there is presence of known biological diversity importance in the macro area (2000 km2), of all 5 sites (Anloga/ Keta, Ada East and Ada West in Ghana; Gran Bassam and Jacqueville in Cote d'Ivore). It is also possible to list two RAMSAR sites in Ghana and one in Cote D'Ivore within the project areas. No UNESCO biosphere reserves are present in Ghana nor in Côte d'Ivoire in the project areas. Critical natural habitats identified within the project areas are: **Ghana (Anloga/ Keta, Ada East, Ada West):** the critical natural habitats identified within the project areas are two RAMSAR sites, one in Anloga/ Keta and one next to Ada East. **Côte d'Ivoire (Grand Bassam, Jacqueville):** one RAMSAR site was identified in Gran Bassam. No areas of national or international interest were identified in the surrounding of Jacqueville.

Despite the presence of critical natural habitat**, output 3.2.1**(Establishment of EWS) is **not triggering any risk** of harming natural habitats, as it requires no construction, physical intervention or land-use/land-cover change. Being a soft measure happening within the physical settlements no risk is triggered. On the contrary, **output 3.2.2. may trigger risks**. Thus, Integrated NBS for urban flood adaptation, will intervene in some spots next to small lagoons, in order to create the biofilters to clean the rainwater discharged into the small lagoons. However, risks are minor, as interventions (which adopt NBS) are meant to ameliorate degraded environments and will bring general improvement of the ecosystems. Still, mitigation and monitoring measures will be undertaken. **Output 3.2.3.** (Mangrove restoration) **will not trigger any risk**: as it is meant to restore existing mangrove sites. On the contrary, it will support critical habitats' state of health. **Output 3.2.4**. (Climate resilient agriculture) will not occur within critical habitats, as it will only insist in existing peri-urban agricultural plots and simply convert the type of crops and improve soil and water management. Hence, **no risk triggered** from output 2.3.4.

WHY THE RISK COULD NOT BE AVOIDED: the sites need to undertake measures to contrast soil erosion and impacts of CC-related floods. The initiative under integrated NBS for urban flood adaptation will mainly ameliorate existing systems (improving the existing hand-dig drainage channels, ensuring that discharge occurs applying biofilters, …). Interventions, which were discussed with both communities and technical experts, were selected among a set of alternative solutions as the less impacting option for the habitats, compared to other more impacting green-grey or grey measures to contrast floods and soil erosion. Still, it can imply some risks. However, mitigation measures are presented in this Annex (see table 5).

Principle 10: Conservation of Biological Diversity

METHOD ADOPTED TO CONDUCT THE RISK SCREENING: To assess that the activities do not trigger any reduction or loss of biological diversity or introduce invasive species, we assessed presence of species at risks or areas of relevant biological diversity mentioned in the IUCN red list, recognition as a UNESCO Man and the Biosphere reserve programme, mentions in the Ramsar site (Convention on Wetlands of International Importance, called Ramsar Convention). Risks related to introduction of invasive species were also assessed. The information was cross-checked through community consultation. Below, more specifically, possible risks are identified per subproject.

RESULT: YES, risk does exist. **EVIDENCE:** Overall, some areas involved in the outputs are considered relevant for biological diversity. The general risks are the same as outlined above under Protection of Natural Habitats. For example, outputs 3.2.1. (Establishment of EWS) does not trigger any risk, as no physical interventions are included. However, biodiversity specific risks are triggered by output 3.2.2 (Integrated NBS for urban flood adaptation), 3.2.3. (Mangrove restoration) and output 3.2.4. (Climate resilient agriculture), as

the activities make use of plants (for biofilters, mangroves, and crops respectively). Even though the design takes into account the risk and aims at adopting native and compatible plants (for details, see subprojects description under annex 3), failure and/or introduction of unsuitable filtering plants/mangrove/crops species carries the risk of damaging biodiversity, including birds, crabs and shellfish that depend on the mangrove/crops for feeding and breeding areas.

WHY THE RISK COULD NOT BE AVOIDED: the sites hosting the RAMSAR sites need to undertake measures to contrast soil erosion and problems derived from impacts of CC-related floods. Measures, being designed in order not to harm biodiversity and not to import non-native species, are the less impacting option for the habitats, compared to grey measures to contrast floods and soil erosion, or to the state of things itself. However, given the existence of possible risks, mitigation measures are presented in this Annex (see table 5).

Principle 11: Climate Change

METHOD ADOPTED TO CONDUCT THE RISK SCREENING: According to the IPCC Guidelines for national GHG inventories, relevant sectors to focus on when considering GHG emissions are: energy; industrial processes (with sub-category 'construction') and product uses; intensive agriculture; and waste. The EU (EU, 2014: GHG emissions from waste disposal) consider road transport as additional sector.

RESULT: **NO**, risk does not exist. **EVIDENCE:** Output 3.2.1. (Establishment of EWS) and output 3.2.3 (mangrove restoration) imply no GHG emissions. Agriculture-related activities (output 2.3.4, Climate resilient agriculture) involve no intensive agricultural practice, so no risk of further GHG emissions either. To conclude, output 2.3.2 (Integrated NBS for urban flood adaptation) will imply, as "construction activity", the only excavation/restoration of existing drainage channels: no industrial nor massive construction activities will be put in place. In addition, for the drainage channels, no concrete will be used, but gravels. Thus, at present, drainage systems are just dig and they do not last enough given the frequent floods. So reinforcing key channels with gravels can help the durability and the proper functioning, but no hard construction activities will be undertaken. Similarly, for output 3.2.4 (Climate resilient agriculture, the trenches and irrigation systems adopt low tech approaches (trenches will be simply dig and the two training centres, one per country, will be small scale shelters like the existing farms in the areas) and will not require industrial nor massive construction activities. For output 3.2.3. (Mangrove restoration and climate resilient agriculture), nurseries will be needed, but existing nurseries will be used: no construction will be needed. To conclude, no risk of GHG emitted. In the contrary, the use of plants and NBS by three out or four outputs, will contribute to GHG storage.

Principle 12: Pollution Prevention and Resource Efficiency

METHOD ADOPTED TO CONDUCT THE RISK SCREENING: The risk screening assessed possible presence of activities under to the project that require major use of energy or the production of wastes and pollutants. In addition, use of materials and resources for outputs' implementation was assessed considering the whole life-cycle of materials. Findings were double checked and validated with communities during consultation, and with national and local different teams of experts, with expertise in in EWS, mangrove restoration and reforestation, coastal ecosystem restoration, hydrology, and agriculture respectively.

RESULT: **YES**, risk does not exist. **EVIDENCE**: activities under the outputs present a low-tech nature and do not imply major use of energy or the production of wastes and pollutants. In addition, all sub-projects comprise activities of small scale at local level. No risk related to massive use of energy or production of waste will occur. No outputs will use any hazardous materials in its construction, so there are no realistic risks of pollution arising from hazardous materials such as asbestos. None of the investments generate waste or bi-products resulting from their day-to-day operation, so risk emerges primarily from the construction phase (requited only for output 3.2.2., Integrated Nature-based). **In particular, output 3.2.1 (Establishment of EWS) triggers no risk, as it requires no construction, no use of resources (or energy), nor production or use of polluting substances. Output 3.2.2 (Integrated NBS for urban flood adaptation) and 3.2.4. (Climate resilient agriculture) trigger potential risk, due to the use of sand and gravels for reinforcing the new drainage channels, and percolation systems for runoff absorption and percolation. Thus,** the construction phase of activities under this output may trigger non-sustainable use of resources. Based on common practice, sand and gravels is usually provided through local uncontrolled process. This may harm the beach or some ecosystems. Dedicated solutions to prevent such dynamic need to be undertaken. On the other hand, the discharge of drainage to the lagoons will trigger no risk of pollution, as drainage water is already discharge without any purification system, and it is normal rainwater. In addition, no industrial areas are in place, which even lower the risk for the rainwater to get polluted while running through streets and channels. In addition, the all new drainage channels will be equipped with biofilters, in order to guaranty a

basic purification process before rain water is discharged into the lagoons, so the quality of the water discharge will improve, compare to the present state of things. Also, because of the small-scale nature of the construction works, such the amount of sand and gravels needed will be minor. Output 3.3.3 (Mangrove restoration) presents no risk, as activities belonging to this output do not imply major use of energy, or production of waste and pollution. Also, as no construction interventions are included, no risk of overuse of resources is identified. To conclude, output 3.2.4. (Climate resilient agriculture) may imply the use of fertilizers, but the output will only promote the use of organic fertilizers and only when necessary. On top, training activities will support the fight to other types of fertilizers and substances with a negative impact on the soil, water and health. There are numerous relevant laws in the area of pollution prevention (such as the water use regulation, the effluent discharge act, the pesticide control and management act, the plants and fertilizers act, … see section II F), and subprojects are designed to comply with the law (see the risk screening for principle 1 above in this annex).

WHY THE RISK COULD NOT BE AVOIDED: these sub-projects represent a risk of overuse of resources because of local common practices (and lack of policies) in the construction sector that have to be considered. However, mitigation measures are presented in this Annex (see table 5).

Principle 13: Public Health

METHOD ADOPTED TO CONDUCT THE RISK SCREENING: to assess potential significant impacts on public health of activities, we adopted the short a screening tool present among the "short guides" listed within the WHO website ("focusing on health", Sweden). The tool is based on a matrix considering as determinants of health: democracy, financial security, employment/education, social network, access to health care centres, belief in the future, physical environment, and living habitats (www.who.int/hia/evidence/doh/en/index5.htlm).

RESULT: NO, risk does not exist. **EVIDENCE:** Generally speaking, no activity within the project represents any risk for **democracy** or **belief in the future**. This is because key principles of the design are participation and equity (with a specific focus to the inclusion of all vulnerable groups), gender aspects were always considered, and freedom of choice pursued. The project will not harm **employment or education**, but on the contrary provide more opportunities in terms of job creation and capacity building. The activities enhance sustainable financial security as well. Risk related to living habitats are already presented under principle 9 (we considered natural critical habitats equal to the item "l**iving habitats**" of the list of determinants of public health). To conclude, outputs were designed with the specific aim of also providing a cleaner environment. For example, output 3.2.2. will introduce biofilters to clean the water from drainage before it reaches the lagoons, mangrove restoration will support the absorption of pollutants, and climate resilient agriculture will promote the use of clean water and will discourage from the use of pesticides and other chemicals that can harm the people.

Principle 14: Physical and Cultural Heritage

METHOD ADOPTED TO CONDUCT THE RISK SCREENING: To assess possible impacts of each activity on the physical and cultural heritage, the presence of physical and cultural heritage in the five locations (Anloga/ Keta, Ada East, and Ada West in Ghana; Grand Bassam and Jacqueville in Côte d'Ivoire). The UNESCO Convention Concerning the Protection of the World Cultural and Natural Heritage was taken as reference for international recognition of physical and cultural heritage, and the list of World Heritage in Danger as well as the List UNESCO World Heritage was adopted.

RESULT: NO, risk does not exist. **EVIDENCE:** Heritage identified within the project areas comprises a forth in Ghana in the surroundings of the target areas. Jacqueville presents no UNESCO Heritage sites. Grand Bassan, in CdI, also hosts UNESCO Heritage. However, no UNESCO heritage exists in the communities where the subprojects will be implemented. To conclude, the only "construction" occurring under the subprojects relates to minor interventions: reinforcing and restoring existing drainage channels and promoting peri-urban sustainable irrigation systems, through sand and gravels (output 3.2.2. and 3.2.4.). The settlements will not be altered by the subprojects.

Principle 15. Lands and Soil Conservation

METHOD ADOPTED TO CONDUCT THE RISK SCREENING: To assess possible impacts of each activity on soil conservation, we focused on two aspects: soil conservation (as meant by FAO "avoiding changes in the health status resulting in diminished capacity of the ecosystem services provisioning); and conservation of valuable lands. For the first aspects, we checked possible fragile soils and identified subproject activities that may diminished the capacity of the soil to provide ES. We based the identification of fragile soils on the knowledge of local experts from the municipality and other soil-related departments. We mainly looked at

coastal soil, soil located on steep slopes, rocky areas with very thin soil, areas showing evidence of soil erosion due to lack of water, water erosion during run-off, or deforestation. In the second case, we mapped the presence of valuable lands, such as agricultural land or ecosystems crucial to the resilience and livelihoods of the city. We also considered as valuable land, areas mentioned under principle 9 and 10 due to their biodiversity or relevance as habitat: we checked possible fragile valuable lands an identified activities included in the subprojects that may convert them or damage them. In this case again, we based the identification of fragile soils on the knowledge of local experts from the municipality and other environmental-related departments. Fragile soils and valuable lands were identified as follows: **Ghana** (Anloga/ Keta, Ada East, and Ada West): for all three sites, the coastal system has to be considered extremely fragile. However, the activities under this component are meant to protect and improve the state of such system. **Côte d'Ivoire** (Grand Bassam and Jacqueville): similarly to the case of Ghana, for both sites, the coastal system has to be considered extremely fragile. However, the activities under this component are meant to protect and improve the state of such system.

RESULT: NO, risk does not exist. **EVIDENCE:** Despite the presence of fragile soils and valuable lands in the project areas, the project ensures no negative impacts lands and soil conservation will result from project activities. All proposed project activities aim to enhance sustainable land and soil use, especially for agriculture use (output 3.2.4., Climate resilient agriculture). On the contrary, it is supposed to lower pressure on water and soil, compared to present agricultural activities and praxis. Regarding output 3.2.1.(Establishment of EWS), as explained above, it requires no construction nor intervention on the land: it is mainly constituted by soft activities. Regarding output 3.2.2. (Integrated NBS for urban flood adaptation) and output 3.2.3 (Mangrove restoration), these activities, occurring in areas characterized by fragile soils, contribute to the protection and restoration of the soil. So no risk is triggered, on the contrary: the activities will support soil protection and improve the state of such system. For all outputs, no major excavations will take place.

3. Environmental and social impact assessment

To provide a better understanding of the interlinkages between impacts, potential risks and mitigation measures, the impact assessment is presented in table 5 of this annex (below).

*4. Environmental and Social Ma**nagement Plan*

Content:

4.1. Allocated roles and responsibilities of the environmental and social risk management/implementation of the ESMP

4.2. Opportunities for adaptive management

4.3. Arrangements to supervise executing entities for implementation of ESMP

4.4. Budget provision to manage environmental and social risks / implement of the ESMP

4.5. Measures to avoid, minimize, or mitigate potential risks (presentation of the overall ESMP)

4.6. Risks monitoring system/indicators

4.7. Grievance mechanism

4.1. Allocated roles and responsibilities for environmental and social risk management / implementation of the ESMP

The Regional Project Supervision Unit will be responsible for environmental and social risks management, including implementation of the Project ESMP. An AF and UN-H policies and reporting compliance expert will be part of the RPSU. This expert will also supervise Project Execution Entities on the implementation of the Project ESMP. Guidelines showing how to comply to the AF ESP and GP will be shared with all execution entities and they will be guided on process, including monitoring. Also, a detailed action plan to comply to ESP and GP will be developed during the project inception phase.

A Safeguarding system compliance expert will also be part of the RPSU. Monitoring staff part of the RPSU will require having expertise in social risk management and be familiar with the AF safeguarding system. The RPSU will be backstopped by UN-Habitat HQ, with experts on climate change, human rights, environmental and social risks managements and gender policies.

In both Ghana and Côte d'Ivoire government stakeholders responsible for compliance to national environmental and social policies and standards will be part of the Regional- and National-level Steering Committees, as well as government gender focal points.

This ESMP will allow country-specific management of the potential risks and impacts identified under in country-specific ESIA and ESMP reports (see link at beginning of this document).

All project-related ToR's and contracts will include clauses stating contractors will need to comply to the AF ESP, especially principle 1 (law), 4 (human rights), 5 (gender) and 6 and 13 (labour and safety) and the AF GP. This includes:

- **Principle 1:** References to standards and laws to which the activity will need to comply will be included in all legal agreements with all sub-contractors, including steps and responsibilities for compliance.
- **Principle 4:** References to relevant Human's rights declarations will be included in all legal agreements with all sub-contractors.
- **Principle 5:** Reference to relevant gender policies
- **Principe 6:** Employment and working conditions following ILO standards will be included in legal agreements with all sub-contractors.
- **Principle 13:** Ensure that ICSC international health and safety standards are clearly accessible and understood. e.g. by putting clearly visible signs detailing health and safety standards to be located at projects sites and by supplying protective equipment.

4.2. Opportunities for adaptive management

When changes in project activities or additional activities are required, these will need to go through a new risks screening and impact assessment process in compliance with AF, UN-Habitat and national policies and standards. When this is required, this will be led by the RPSU and the Regional-level Project Steering Committee would need to approve the changes. As for opportunities, this would be possible following above process. With the Covid-situation, physical meetings may need to be online. Budget savings may be re-allocated through approval of the steering committee and if over 10 percent change, by the AF.

4.3. Arrangements to supervise executing entities for implementation of ESMP

Annex Table 26 Capacity of potential executing entities to carry-out gender responsive activities

Potential executing entity	Skills and expertise to provide gender mainstreaming inputs	Specific requirements execution entities for compliance	Capacity building needs
LUSPA MdP	Limited (as government entity)	Appoint ESP a compliance and gender focal point Capacity to comply to the AF ESP and implementation of the ESMP guided by UN-Habitat Capacity to comply to the AF GP.	Awareness on requirements Share guidelines for execution entities to comply and to ensure 'opportunities' are identified and exploited
Companies/ consultancy firms Development Institute NGO UCC	Limited (as company)	Appoint ESP a compliance and gender focal point Capacity to comply to the AF ESP and implementation of the ESMP guided by UN-Habitat Capacity to comply to the AF GP	Awareness on requirements Share guidelines for execution entities to comply and to ensure 'opportunities' are identified and exploited Support development baseline and approach before project start + reporting requirements
Abidjan Convention	Yes (UN core value)	Appoint ESP a compliance and gender focal point Capacity to comply to the AF ESP and implementation of the ESMP guided by UN-Habitat Capacity to comply to the AF GP.	

4.4. Budget provision to manage environmental and social risks / implement of the ESMP

Dedicated safeguard compliance staff time is allocated under project execution fees for USD 30,000. Also, dedicated AF ESP and GP compliance staff time is allocated under MIE management fee for ROAF of USD 170,000. These persons will ensure compliance and develop ESP and GP compliance guidelines and action plans for execution entities and guide these execution entities through the process, including baselines and reporting requirements. Besides these measures are budgeted, through the execution entities, to supervise and monitoring proposed project activities, including e.g. water sampling, remote monitoring system, etc. Costs for risks mitigation measures are integrated in the budget, including e.g. monitoring of the implementation of the subprojects, including the origin of materials (sand and gravels) and plants, soil and hydrodynamics analysis.

4.5. Measures to avoid, minimize, or mitigate potential risks

Annex Table 27 **Overview of project activities' screening and assessment results against the 15 AF risk areas / principles, including measures to avoid or mitigate risks / impacts**

Risks identified through the screening, by principle	Potential risk impact assessment	Measures to avoid or mitigate the impacts	M&E arrangements	
			Indicator and method	Responsibility and frequency
Principle 2 For all outcomes, with a dedicated zoom on outcome 3.2. to better detail mitigation measures for the physical interventions within the subprojects	For **all outcomes** (except outcome 3.2), **the probability of risk is low**, as all institutions involved have the mandate to ensure that equity and access are guaranteed into decision-making and participation processes, capacity building activities, and spatial planning processes. In addition, UN-Habitat, in collaboration with other UN agencies and with the Abidjan convention, will ensure that all activities are designed to meet this principle (which is also aligned with the UN SDGs). However, people involved by all outcomes (except outcome 3.2) are 2600 (direct beneficiaries) with the addition of all people with internet access for online products delivered under outcome 1.1. If the project fails to fully ensure access and equity to benefits derived from activities, significance of the impact was assessed as **"medium significance"**. For outputs under outcome 3.2., the **probability of risk is positive**, and **significance** was assessed as "**medium**". Beneficiaries under outcome 3.2 are 348,401. If people cannot equally access the preparation phase of the project, the outputs (3.2.1. Establishment of EWS; 3.2.2. Integrated NBS for urban flood adaptation; 3.2.3. mangrove restoration; and 3.2.4. climate resilient agriculture) will not address the needs of all target groups. Similarly, during the implementation phase, if it will be perpetuated a cycle where women and vulnerable groups in general are excluded from EWS training and job opportunities, both safety and economic situation of these groups will be affected. In particular, job opportunities under construction/planting phase imply an income of approx. 600 USD per month, for five months (for details, see budget). To conclude, also indirect job opportunities deriving from the positive effect of outputs (for example from fisheries in the restored mangroves systems, and from the climate resilient agriculture activities) may also be affected.	**For all outcomes** (except outcome 3.2): different stakeholders and groups will be mapped. Organization of all activities will be designed to ensure equitable access to different groups. Decision making process, from regional level round-tables (under component 1) to the development of spatial planning frameworks and community plans (component 2 and 3), will be designed talking into account the different groups and needs (as already initialized in the preparation of the project, for consultation). In addition, the organization of trainings and capacity building activities under the three components will be useful tool to ensure that equity is always put in place. To conclude, equality and access will be highlighted as aspects in the cross-fertilization and lesson-learned mainstreaming. **Outcome 3.2. - Subprojects:** Although the project preparation process has been fully participatory, there can still be a risk of non-equal participation / representation and decision-making during project implementation activities. Implementation activities will be presented to the different communities and their perception will be included. In addition, controls will be set up to ensure implementation activities keep including representatives from all groups of the communities (with a particular focus on vulnerable and marginalized group: see under principle 3 here below). As described under section 4.7. (grievance mechanism), a combination of mailboxes (at community / building level) and telephoning options will offer an immediate way for people affected by the project to safely express their concerns. The options will allow local languages and offer the opportunity for and people affected by the project to complain or provide suggestions on how to improve project design and implementation, which will be reviewed and taken up by the project implementation team.	Indicators: N of women per meeting/training N of people by Country (for international meeting) Presence of marginal-groups representative Method: Implementation of mitigation measures will be assessed and indicators will be collected through: -regular meetings with key local stakeholders -progress reports -Meetings' attendance lists and minutes -Grievance reports	UN-H in cooperation with execution entities / government entities For all outcomes (except outcome 3.2): every 6 months. For outcome 3.2: every 3 months.
Principle 3 For all outcomes, with a dedicated zoom on outcome 3.2. to better detail mitigation measures for the physical interventions within the subprojects	Similarly to principle 2, in the case of principle 3 **the probability of risk is low** for **all outcomes** (except outcome 3.2), as all institutions involved have the mandate to ensure that vulnerable groups are included into participation processes, and capacity building activities, and that their need are considered into decision-making and spatial planning processes. In addition, UN-Habitat, in collaboration with other UN agencies and with the Abidjan convention, will ensure that all activities are designed to meet this principle. However, people involved by all outcomes (except outcome 3.2) are 2600 (direct beneficiaries) with the addition of all people with internet access for online products delivered under outcome 1.1. If we consider only indirect beneficiaries of component two, due to the potential echo of planning activities, the indirect benefits are around ten times the direct benefits. More specifically, in communities in Ghana, poverty rate is low (around 3% of the population) while in CdI it reaches 30%. Youth population represents approx. 40% in Ghana and 60% in Côte d'Ivoire. No migrants nor refugees are present in the communities, while disabled people and people affected by	**For all outcomes** (except outcome 3.2): Activities under component 1 and 2 will ensure that the voice of most marginalized and vulnerable groups is included and heard. Additionally, the inclusion of most vulnerable and marginalized groups will be highlighted as aspect in the cross-fertilization and lesson-learned mainstreaming. For outcomes 3.1 and 3.3. under component 3, there risk of non-equal participation of all groups: detailed mapping of the most vulnerable people in the specific communities will be realized, in order to include them into training activities (outcome 3.3.) and in the participatory process under the community plans (output 3.1). **Outcome 3.2. - Subprojects:** detailed mapping of the most vulnerable people in the specific areas of intervention will be	Indicators: N of women per meeting/training N of people by Country (for international meeting) Presence of marginal-groups representative Method: Implementation of mitigation measures will be assessed and indicators will be collected through: -regular meetings with key local stakeholders	UN-H in cooperation with execution entities / government entities For all outcomes (except outcome 3.2): every 6 months. For outcome 3.2: every 3 months.

	HIV are around 4% and 2% in Ghana; 1% and 2,5% in CdI. Overall, the number describe high level of vulnerabilities in the targeted communities. If the project fails to fully ensure inclusion of vulnerable people in the benefits derived from activities, significance of the impact was assessed as **"medium significance"**. For outputs under outcome 3.2., the **probability of risk is positive**, and **significance** was assessed as "**medium**". Beneficiaries under outcome 3.2 are 348,401. If people cannot equally access the preparation phase of the project, the outputs (3.2.1. Establishment of EWS; 3.2.2. Integrated NBS for urban flood adaptation; 3.2.3. mangrove restoration; and 3.2.4. climate resilient agriculture) will not address the needs of all target groups. Similarly, during the implementation phase, if it will be perpetuated a cycle where marginalized and vulnerable groups in general are excluded from EWS training and job opportunities, both safety and economic situation of these groups will be affected. In particular, job opportunities under construction/planting phase imply an income of approx. 600 USD per month, for five months (for details, see budget). To conclude, also indirect job opportunities deriving from the positive effect of outputs (for example from fisheries in the restored mangroves systems, and from the climate resilient agriculture activities) may also be affected. It is key to remember that given the poverty rate of the target areas, poor are considered a vulnerable group, hance potential income loss is a major impact to be considered.	realized. Final specifications of the subprojects will be presented and discussed with representatives from the most vulnerable/marginalized categories of people/households (in particular women, youth, elderly and disables). Work plan and indicative timeframe will be presented and discussed in "safe" platforms. Communication channels with vulnerable people/households will be established. Requirements for employment (for the different positions) will be drafted in consultations with representatives of the women, youth and disabled for ensuring equal access to job opportunities. As described under section 4.7. (grievance mechanism), a combination of mailboxes (at community / building level) and telephoning options will offer an immediate way for people affected by the project to safely express their concerns. The options will allow local languages and offer the opportunity for and people affected by the project to complain or provide suggestions on how to improve project design and implementation, which will be reviewed and taken up by the project implementation team.	-progress reports -Meetings' attendance lists and minutes -Grievance reports	
Principle 5 For all outcomes, with a dedicated zoom on outcome 3.2. to better detail mitigation measures for the physical interventions within the subprojects	For **all outcomes** (except outcome 3.2), **the probability of risk is low**, as all institutions involved have the mandate to ensure that gender equality is guaranteed into to decision-making and participation processes, capacity building activities, and spatial planning processes. In addition, UN-Habitat, in collaboration with other UN agencies and with the Abidjan convention, will ensure that all activities are designed to meet this principle (which is also aligned with the UN SDGs). However, especially for all activities occurring at national and subnational level (components 2 and 3), it is key to remember that, in Côte d'Ivoire , in the public sector, the proportion of women according to rank is: 18.6% for entry level positions, 27.6% for middle management positions, 37.3% for management positions, and 36.1% for executive level positions. Only 12.2% of women make up the highest positions in the public sector. Ghana present better numbers, but in many organizations women remain in supportive positions such as typists, secretaries, receptionists and caterers, which are not central to the main operations of these institutions. Given these numbers and the exiting trends, it is clear that women may be excluded by decision making, as well as from capacity building activities, which would impact on their carrier and income. Thus, significance has been assessed as medium. For outputs under outcome 3.2., the **probability of risk is positive** Beneficiaries from outcome 3.2 are 348,401. If women cannot equally access the preparation phase of the project, the outputs (3.2.1. Establishment of EWS; 3.2.2. Integrated NBS for urban flood adaptation; 3.2.3. mangrove restoration; and 3.2.4. climate resilient agriculture) will not address their needs (and not even children's ones). Similarly, during the implementation phase, if it will be perpetuated a cycle where women are excluded from EWS training and job opportunities, both safety and economic situation will be affected. In particular, job opportunities under construction/planting phase imply an income of approx. 600 USD per month, for five months (for details, see budget). To conclude, also indirect job opportunities deriving from the positive effect of outputs (for example from fisheries in the restored mangroves systems, and from the climate resilient agriculture activities) may also be affected. Considering that in the target areas, female population is	**For all outcomes** (except outcome 3.2): Activities under the three components will ensure that the voice of women is included and heard. Organization of all activities will be designed to ensure gender balance. Decision making process, from regional level round-tables (under component 1) to the development of spatial planning frameworks and community plans (component 2 and 3), will be designed directly involving women in the process, and talking into account their needs (as already initialized in the preparation of the project, for consultation). In addition, the organization of trainings and capacity building activities under the three components will be useful tool to ensure that women are involved in the process. To conclude, gender equality will be highlighted as aspects in the cross-fertilization and lesson-learned mainstreaming. **Outcome 3.2. - Subprojects:** in general, to ensure not only their formal presence, but women's real contribution to the sub-projects, community associations and groups leaders will be sensitized on the role of the women in the communities/households and to capture their needs and perceptions. To ensure that women access the EWS-related training, a 50% of available sits will be dedicated to them, and the organization of activities will consider women availability to participate in terms of time of the day and day of the week. For all outputs under outcome 3.2., protective measures, fair salary for the required work positions will be developed and shared to encourage women to apply. During implementation, jobs times table will be developed in way to respect (meet) women household responsibilities. As described under section 4.7. (grievance mechanism), a combination of mailboxes (at community / building level) and telephoning options will offer an immediate way for people	Indicators: N of women per meeting/training % of contracts issues to women Method: Implementation of mitigation measures will be assessed and indicators will be collected through: -regular meetings with key local stakeholders -progress reports -Meetings' attendance lists and minutes -Grievance reports	UN-H in cooperation with execution entities / government entities For all outcomes (except outcome 3.2): every 6 months. For outcome 3.2: every 3 months.

	slightly above 50% in communities in Ghana, while it is around 25% in communities in Côte d'Ivoire (see annex 5), the risk would impact between 25 and 50% of the populations in the communities.	affected by the project to safely express their concerns. The options will allow local languages and offer the opportunity for and people affected by the project to complain or provide suggestions on how to improve project design and implementation, which will be reviewed and taken up by the project implementation team.		
Principle 6 For all outcomes, with a dedicated zoom on outcome 3.2. to better detail mitigation measures for the physical interventions within the subprojects	For **all outcomes** (except outcome 3.2), **the probability of risk is low**, as all institutions involved have the mandate to ensure that core labour rights are guaranteed into to decision-making and participation processes, capacity building activities, and spatial planning processes. In addition, UN-Habitat, in collaboration with other UN agencies and with the Abidjan convention, will ensure that all activities are designed to meet this principle (which is also aligned with the UN SDGs). However, for activities addressed an national and subnational level (components 2 and 3), it is key to remember that neither Ghana nor Côte d'Ivoire include some key ILO technical standards in their legislation. Hence, there could be legal contracts that do not comply with ILO standards, such as minimum labour age. This risk to trigger people working in not safe environments, minors being hired, unfair salaries, … Given the fact that direct beneficiaries under component 2 and 3 (excluding outcome 3.2) are almost 2000, it is crucial to ensure that any contract being issued also complies with international standards. Significance of the impact was assessed as **"medium significance"**. For outputs under outcome 3.2., the **probability of risk is positive**, and **significance** was assessed as "**medium**". Local people being hired under such components for the implementation phase will be around 100. If no proper contracts are issued (due to the fact that national legislations comply with fundamental ILO standards, but not with technical ILO standards) the risk is that people work in unsafe environments, that minors are hired, that salaries are unfair, … it is crucial to ensure that any contract being issued also complies with international standards. Significance of the impact was assessed as **"medium significance"**.	**For all outcomes** (except outcome 3.2): for component 1, when contracting is required, international standard clauses will be addressed. For component 2 and 3, when contracting is required, national standard clauses will be addressed. For local contracts NOT all the ILO standards and principles are clearly regulated and exercised in the 2 national labour legislations. In agreement with the government and communities, inclusion of minimum social security, occupation safety and health as in the ILO conventions measures when contracting community member and local enterprises. All the employment contracts will be in written documents and registered according to the Countries labour law and conditions in line with other similar work as public works. To conclude, safe spaces for labours complains, dissatisfaction will be established. **Outcome 3.2. - Subprojects:** The 2 Countries present a labour law, nevertheless NOT all the ILO standards and principles are clearly regulated and exercised in the 2 labour legislations especially the ones related to social security and occupational safety and health. In agreement with the government and communities, inclusion of minimum social security, occupation safety and health as in the ILO conventions measures when contracting community member and local enterprises. All the employment contracts will be in written documents and registered according to the Countries labour law and conditions in line with other similar work as public works. To conclude, safe spaces for labours complains, dissatisfaction will be established. As described under section 4.7. (grievance mechanism), a combination of mailboxes (at community / building level) and telephoning options will offer an immediate way for people affected by the project to safely express their concerns. The options will allow local languages and offer the opportunity for and people affected by the project to complain or provide suggestions on how to improve project design and implementation, which will be reviewed and taken up by the project implementation team.	Indicators: N of contracts being registered N of contracts issues to women N of contracts issued to minors N of contracts issued to marginal groups N of people injured during work hours Average number of working hours per day Method: Implementation of mitigation measures will be assessed and indicators will be collected through: -regular meetings with key local stakeholders -progress reports -Grievance reports -Entities in charge of issuing contracts will have to monitor the indicators above listed, and report	UN-H in cooperation with execution entities / government entities For all outcomes (except outcome 3.2): group): every 6 months. For outcome 3.2: every 3 months.
Principle 9 Only for outcome 3.2.	Principle 9 is only triggered by outputs under outcome 3.2. (subprojects). The probability of risk is positive, its significance is medium. In particular, the output triggering the risk is output 3.2.2 (Integrated NBS for urban flood adaptation), among which activities there is the amelioration of key drainage channels (using sand and gravels). Even though the risk is minor, as sand is meant to come from surrounding areas, there is still potential to alter the equilibrium. This activity may trigger risks because of the habit to collect sand in an uncontrolled/unsustainable way that may negatively affect protected areas in the surroundings. Connectivity of the ecosystems, however, will not be harmed.	**Outcome 3.2. - Subprojects:** This risk is being triggered by output 3.2.2. under outcome 3.2., which correspond to Integrated NBS for urban flood adaptation. The design of the implementation strategy will pay particular attention to ensure that sand and gravels for reinforcing the drainage channels are collected from surrounding areas will similar characteristics, in order not to: not degrade or negatively impacts on a surrounding ecosystem, but to disaggregate the intervention into small interventions to have no-impact on the ecosystems; ii) in order to ensure that sand and gravels will not import any new organism that may affect habitat/protected areas. By-laws to ensure proper and sustainable sand-mining will have to be enforced in a stricter manner, including payment of penalties; involving the populations in this process through awareness-raising and surveillance mechanisms.	Indicators: Tons of sand/gravels collected from one single site Method: Implementation of mitigation measures will be assessed and indicators will be collected through: -monitoring on the interventions on a regular basis during implementation -Monitoring on the state of surrounding protected areas and the mentioned impacts -Meetings attendance lists and minutes	UN-H in cooperation with execution entities / government entities -monitoring on the interventions on a regular (weekly) basis during implementation -monitoring on the state of surrounding protected areas and the mentioned impacts every 4 months

			-progress reports.	
Principle 10 Only for outcome 3.2.	Principle 10 is only triggered by outputs under outcome 3.2. (subprojects). The **probability of risk is positive, its significance is medium**. In particular, the outputs triggering the risk are output 3.22. (Integrated NBS for urban flood adaptation), output 3.2.3 (mangroves restoration), and output 3.2.4 (climate resilient agriculture), among which activities there is the plantation of plants and crops for biofiltering, reforestation, and agricultural purposes respectively. Biofilter are minor interventions of few tens of square meters each, while output 3.2.3 delivers 582 hectares of reforestation and output 3.2.4. delivers around 550 acres of agriculture. Of course, the subprojects are designed to only make use of local species. In particular, existing species were mapped and listed. However, even the import of local species from another local area that is few tens or hundreds of km far, may imply the import of different organisms. To conclude, only native species will be used, but mitigation measures are needed to ensure that the species also come from the target areas themselves, not to alter the biodiversity of the habitats.	**Outcome 3.2. - Subprojects:** This risk is being triggered by output 3.2.2., 3.2.3, and.3.2.4, where plants and crops plantation is required. The design of the implementation strategy will pay particular attention to ensure that plants and crops are collected from surrounding areas will similar characteristics, in order not to import any new plant nor organism that may affect the biodiversity of the areas. By-laws to ensure that non-native species are imported will have to be enforced in a stricter manner, including payment of penalties; involving the populations in this process through awareness-raising and surveillance mechanisms.	Name and origin of the plants will be listed in a report. A list of name of plants and origins will be provided to each community. Indicators: N of plants with name and origin not contained in the list Method: Implementation of mitigation measures will be assessed and indicators will be collected through: -monitoring on the interventions on a regular basis during implementation -Monitoring on the state of surrounding protected areas and the mentioned impacts -Meetings attendance lists and minutes -progress reports.	UN-H in cooperation with execution entities / government entities -monitoring on the interventions on a regular (weekly) basis during implementation -monitoring on the state of surrounding protected areas and the mentioned impacts every 4 months
Principle 11 Only for outcomes under components 1 and 2	Principle 11 is triggered by activities under components 1 and 2, which requires international travelling through flights for high level meetings, capacity building activities, and international consultants missions. Considering the regional meetings under component 1 (8 meetings involving around 30 people), and meetings and training under component 2 and international consultants travelling for specific analysis and to provide trainings, it means around 1000 participants throughout the whole project. A rough calculation of emissions tell us that 1000 flights imply around 600 tons of CO2. Impact must be considered marginal, however **risk probability is positive, with significance is low**.	Only for component 1 and 2: considering the international flights for meetings and missions being caught during the project, around 600 tons of GHG will be emitted. Even though the project chose to substitute some live-meeting with online meetings and activities, some travelling are needed to ensure participation, proper decision-making and knowledge transfer. However, based on a UNHCR rough estimation, around 10 hectares of forest are needed to compensate. Mitigation measures in this case are already included under reforestation activities (around 500 hectares) in component 3 (output 3.2.3.).	Indicators: N of attendances to meetings (trainings) who came through international flight N of hectares of mangroves planted Method: -Implementation of mitigation measures will be assessed and indicators will be collected through: Attendance list of live events under component 1 and 2, with international participants. -progress reports from mangrove reforestation activities	UN-H in cooperation with execution entities / government entities Number international attendances and amount of hectares of mangroves planted: once a year.
Principle 12 Only for outcome 3.2.	Principle 12 is only triggered by outputs under outcome 3.2. (subprojects). In particular, it is triggered by output 3.2.3. and 3.2.4., in terms of non-sustainable use of resources. The risk and its impacts, related to the origin of the sand and gravels needed to reinforce the drainage channels and set up the sustainable irrigation systems for the climate resilient agriculture, is already described under principle 9. Given the local tendencies to procure sand through uncontrolled process (and sometimes informally), the risk probability is positive, and significance is medium. The sand and the gravels could be massively be taken from one unique plot, harming a beach or another site, and also triggering land-slide issues. The material needs to be taken from different spots, in order to minimize the impact, and to be obtained through enterprises that do it through a sustainable protocol: mitigation measures need to be put in place. No other risks identified under this principle.	**Outcome 3.2. - Subprojects: similarly to what stated under principle 9, t**his risk is being triggered by output 3.2.2 and 3.2.4. under outcome 3.2., which correspond to Integrated NBS for urban flood adaptation and climate resilient agriculture. The design of the implementation strategy will pay particular attention to ensure that sand and gravels for reinforcing the drainage channels are collected from surrounding areas will similar characteristics, in order to ensure that sand and gravels are collected from proper areas and in a sustainable way. Activities will be organized in collaboration with local authorities, to protect the surrounding protected areas. By-laws to prevent informal sand-mining will have to be enforced in a stricter manner, including payment of penalties; involving the populations in this process through awareness-raising and surveillance mechanisms.	Indicators: Tons of sand/gravels collected from one single site Method: Implementation of mitigation measures will be assessed and indicators will be collected through: -monitoring on the interventions on a regular basis during implementation -Monitoring on the state of surrounding protected areas and the mentioned impacts -Meetings attendance lists and minutes -progress reports.	UN-H in cooperation with execution entities / government entities -monitoring on the interventions on a regular (weekly) basis during implementation -monitoring on the state of surrounding protected areas and the mentioned impacts every 4 months

4.6. Risks monitoring system / indicators

The environmental and social risks management approach includes monitoring of potential risks and implementation of risks mitigation measures. This monitoring program commensurate with project activities and will report on the monitoring results to the Fund in the mid-term, annual, and terminal performance reports. Monitoring will be done to ensure that actions are taken in a timely manner and to determine if actions are appropriately mitigating the risk / impact or if they need to be modified in order to achieve the intended outcome. Annual reporting will include information about the status of implementation of this ESMP, including those measures required to avoid, minimize, or mitigate environmental and social risks. The reports shall also include, if necessary, a description of any corrective actions that are deemed necessary.

The Regional Project Supervision Unit will be responsibility for environmental and social risks management, including monitoring of the implementation of the Project ESMP. An AF and UN-H policies and reporting compliance expert will be part of the RPSU. A Safeguarding system compliance expert will also be part of the RPSU. Monitoring staff part of the RPSU will require having expertise in social risk management and be familiar with the AF safeguarding system. Gender specific indicators and targets have been developed as shown in the results framework and Annex 6. Specific budgets for risks monitoring are covered by M & E staff time under the execution fee (USD 30,000).

Annex Table 28 **Monitoring arrangements for general risks management**

Action	Indicator and method	Responsibility and frequency
Monitoring of capacity execution entities to comply	Guidelines and action plans shared Monitoring reports comply to requirements	RPSU; within half a year from inception RPSU; when reports are required
Implementation of grievance mechanism	Grievance mechanism information is at target locations (buildings, etc.) Grievance mechanism information is shown on UN-Habitat project website	RPSU in coordination with execution entities; within half a year from inception RPSU in coordination with execution entities; within half a year from inception
Monitoring of measures to avoid or mitigate risks/ impacts per output	See table above	RPSU in coordination with execution entities; when reports are required

4.7. Grievance mechanism, consultation and public disclosure

UN-Habitat in coordination with the execution entities will implement a grievance mechanism in the target areas, which will allow an accessible, transparent, fair and effective means of communicating if there are any concerns regarding project design and implementation. Project employees, and people benefitting / affected by the project will be made aware of the grievance mechanism for any criticism or complaint of an activity.

This mechanism considers the special needs of different groups as well as gender considerations and potential environmental and social risks, especially human rights (as shown on posters). A combination of mailboxes (at community / building level) and telephoning options offer an immediate way for employees and people affected by the project to safely express their concerns. The options will allow local languages and offer the opportunity for and people affected by the project to complain or provide suggestions on how to improve project design and implementation, which will be reviewed and taken up by the project implementation team.

Project staff and execution entities will be made aware of the procedures for receiving messages and on the reporting of any grievances. In addition, monitoring activities allow project participants to voice their opinions or complaints as they may see fit.

The address and e-mail address of the Adaptation Fund will also be made public (i.e. project website, Facebook and mailbox) for anyone to raise concerns regarding the project. For country-specifics recommendations regarding the grievance mechanisms, see country specific ESIA-ESMPs.

Regarding public disclosure, the results of the environmental and social screening and a draft environmental and social assessment, including any proposed management plan, have been presented and validated in all communities. In addition, the material has been made available for further public consultations and held free of coercion and in an appropriate way for communities that are directly affected by the proposed project/programme. The implementing entity is responsible for disclosing the final environmental and social assessment to project-affected people and other stakeholders. Project/programme performance reports (including the status on implementation of environmental and social measures) will be publicly disclosed throughout the process of the outcomes. Any significant proposed changes in the project/programme during implementation will be addressed and presented for public consultation with directly affected communities.

ANNEX 6: DETAILED PROJECT ALIGNMENT WITH NATIONAL AND SUB-NATIONAL STRATEGIES

Annex Table 29 Ghana project alignment with National and sub-national priorities

Policy / Document	Year submitted / ratified	Compliance with the project (Relevant priorities)
Ghana		
Climate Change strategies / plans		
National Adaptation Planning (NAP)	2018	Support goals of the NAP process: Identify priority climate adaptation actions in the medium and long terms Facilitate institutional coordination around climate change adaptation Accelerate the mobilization of funds for climate change adaptation
Intended Nationally Determined Contribution (INDC)	2015	Alignment with priority sectors such as sustainable land use including food security, climate proof infrastructure, equitable social development, and sustainable forest management. Support on achieving the goal "increase climate resilience and decrease vulnerability for enhanced sustainable development". Alignment with priority adaptation policy actions: agriculture and food security, sustainable forest resource management, water resources, gender and the vulnerable.
National Climate Change Policy	2013	Support the vision of the plan "ensure a climate-resilient and climate-compatible economy while achieving sustainable development through equitable low-carbon economic growth for Ghana." Alignment on 2 of the main objectives: effective adaptation and social development. Alignment on main thematic areas: natural resource management, agriculture and food security, disaster preparedness and response.
National Climate Change Adaptation Strategy 2010-2020	2010	Support the intentions of the plan: Deepen awareness and sensitisation for the general populace particularly policy makers about the critical role of adaptation in national development efforts, Strengthen International recognition to facilitate action, Facilitate the mainstreaming of Climate change and disaster risk reduction into national development. Alignment with key principles such as Promotion of sustainable development and poverty reduction are focus areas of the adaptation strategy, Stakeholder participation is central, Gender sensitivity and reduction of vulnerability are extensively adopted
Plan of Action on Disaster Risk Reduction and Climate Change Adaptation 2011-2015	2011	Alignment with strategic goals: Ensure that disaster risk reduction is a national and a local priority with a strong institutional basis for implementation. Identify, assess and monitor disaster risk Use knowledge, innovation and education to build a culture of safety and resilience at all levels. Reduce the underlying risk factors
National Development strategies / plans		
Long-Term National Development Plan for Ghana, 2018-2057	2017	Support achieving the long-term goals such as building a resilient economy, and build safe, well-planned and sustainable communities.
National Spatial Development Framework 2015-2035	2015	Continue efforts of national and local governments on developing Spatial Development Frameworks understood as "roadmap for the future development of a limited geographical area". Support the pillars of the spatial strategy: Emphasise balanced polycentric development. Improve regional, national, and international connectivity. Ensure sustainable development and protect ecological assets.
Ghana's Shared Growth Development Agenda II (GSGDA II)	2015	Alignment with prioritised thematics such as accelerated agricultural modernisation and natural resource management; infrastructure and human settlements development; and human development, productivity and employment.
Environmental strategies / plans		
National Environmental Policy (NEP)	2014	Aligned with policies goals: Reversing the current insufficient commitment to environmental objectives, policies and interventions Reversing rapid population growth, economic expansion, persisting poverty, poor governance and institutional weaknesses and failures Improving quality and flow of information

		Creating an understanding of the nature and causes of environmental problems Establishing a clear definition of the national environmental agenda and its links to economic growth and poverty reduction and weak legal, regulatory, financial, technical, human and institutional capacity Mainstreaming international relations into the national environmental agenda Improving the current environmental quality control programme by which prior environmental impact assessments of all new investments that would be deemed to affect the quality of the environment are undertaken.
Environmental Policy and Action Plan	1990	Alignment with the outcomes of the policy: Maintenance of ecosystems and ecological processes. Sound management of natural resources and the environment. Protection of humans, animals, plants and their habitats. Guidance on healthy environmental practices in the national development effort. Common approach to regional and global environmental issues. Support on addressing key challenges such as forestry and wildlife, land management, water management, marine and coastal ecosystems, human settlements,
Ghana REDD+ Strategy (2016-2035)	2016	Denotes the suite of interventions that seek to reduce emissions from deforestation and forest degradation whilst incorporating the role of conservation, sustainable forest management and enhancement of forest carbon stocks in developing countries.
Forestry Development Master Plan 2016 – 2036	2016	The objective of the Master Plan is to ensure sustainable forest management, ecosystem preservation, biodiversity conservation, wildlife protection, environmental protection, soil conservation, land use planning, sustainable use of forest resources, afforestation, rehabilitation and restoration of degraded landscapes, and plant cultivation, in a socially equitable manner.
Sectoral strategies / plans		
National Gender Policy	2015	The implementation of the interventions will take all necessary steps to ensure the full integration of men and women into the mainstream operations of the project.
Forest and Wildlife Policy	2012	Aligned with policy objectives: Manage and enhance ecological integrity of forest, savannahs, wetlands and other ecosystems. Promote rehabilitation and restoration of degraded landscapes. Promote the development of viable forest and wild-life based livelihoods. Promote and develop mechanisms for transparent governance, equity sharing and citizens' participation in forest and wildlife resource management.
National Wetlands Conservation Strategy,	2007	The project will follow the recommendations and frameworks necessary to ensure the conservation of Ghana's wetlands and their associated ecosystem goods and services. Aligned with the objective: promote the use of wetlands for farming, grazing, fishing, timber production and salt-winning, provided that such uses also serve to conserve the ecosystem, biodiversity and sustainable productivity of the wetlands.
National Water Policy (NWP).	2007	Support on the sustainable development and utilization of Ghana's water resources.
National Land Policy	1999	Support objectives of the policy: Ensure that every socio-economic activity is consistent with sound land use through sustainable land use planning in the long-term Promote community participation and public awareness at all levels
Coastal Wetlands Management Plan	1991	Support adequate management of prioritised lagoons and surrounding environments: Songor and Keta lagoons. Supports continuity of activities to be rolled out such as development of management systems for the coastal zone, protection of selected coastal areas, and set-up of coastal zone data base.
Sub-national plans		
Greater Accra Spatial Development Framework	2017	Support on the implementation of the Land Use Planning and Management Project through "preparation of improved maps and spatial data for land administration" which includes the preparation of Regional Spatial Development Frameworks". Alignment with the Manual for the Preparation of Spatial Plans 2011.
Ada West District Medium Term Development Plan (2018-2021)	2017	Support on identified key challenges: Over exploitation of fisheries resources. Increased vulnerabilities of coastal communities. Weak development control Lack of alternative livelihoods for coastal communities. Weak capacity to manage the impacts of natural disasters and climate change. High levels of youth unemployment. Incidence of poverty among farmers and fishermen. Weak citizens engagement in decision making. Low women representation and participation. Support the implementation of policy objectives:

		Promote seed and planting material development. Enhance fish production and productivity. Promote aquaculture development. Ensure sustainable management of natural resources. Increase capacities to adapt to climate change impacts. Enhance capacity to mitigate and reduce the impact of natural disasters, risks, and vulnerability.
Keta District Medium Term Development Plan (2018-2021)	2017	Support on addressing development priorities: Build a prosperous society (economic development). Linked to challenges such as inadequate job creation, loss of soil fertility, low agriculture production, coastal area erosion, depletion of mangrove vegetation. Safeguard the natural environment and ensure a resilient built environment. Linked to challenges such as poor environmental sanitation and hazardous development.
Ada East District Medium Term Development Plan (2018-2021)	2017	Support on addressing identified key challenges such as provision of planning schemes and improvement in revenue generation. Support addressing objectives and implementing programmes: Promote a sustainable spatially integrated, balances and orderly development of human settlements: infrastructure development sub-programme Enhance climate change resilience: disaster prevention and management sub-programme. Improve popular participation at the regional and district level: general administration sub-programme. Promote economic empowerment for women: trade, tourism and industrial development sub-programme.

Annex Table 30 Côte d'Ivoire project alignment with National and sub-national priorities

Policy / Document	Year submitted / ratified	Compliance with the project (Relevant priorities)
Côte d'Ivoire		
Climate Change strategies / plans		
Programme National Changement Climatique 2015-2020	2014	The programme aims at establishing by 2020 a framework for sustainable socio-economic development that integrates the challenges of climate change in all sectors in Côte d'Ivoire and that contributes to improving resilience. This programme emphasizes on vulnerable sectors including coastal resources, with promotion of adaptation actions.
Programme d'appui du PNUD à la mise en œuvre des Contributions Déterminées au niveau national (CDN) de la Côte d'Ivoire	2018	The Programme defines the objective to elaborate a National Gender and Climate Change Strategy and Action Plan; and includes capacity building for national actors so that they are capable to implement. The Programme also aims at including a gender dimension in the communication strategy about the NDC
Cadre National des Services Climatiques (CNSC)	2017	Optimize the management of risks related to climate change and promote adaptation to climate change by producing scientifically-based information and forecasts on climate and taking them into account in planning processes, policies development,
Stratégie Nationale de Gestion des Risques de Catastrophes (SNGRC) & Plan d'Action	2011	Management of risks and disasters in the face of growing risks Strengthen disaster preparedness to respond effectively and to 'rebuild better" during the recovery, rehabilitation and reconstruction phase.
First intended nationally determined contribution (INDC) Côte d'Ivoire	2016	Strengthen country's resilience to climate change adaptation Align sectoral policies and strengthen its mechanism and implementation tools to facilitate the achievement of these objectives Priority vulnerable sectors; coastal areas, agriculture, aquaculture, water resources, forests, gender, health
National du Developpement durable en Côte d'Ivoire dans la perspective de Rio+20	2012	Aims at revising the success and gaps at the achievement of SDGs Provide proposals related to green growth and Sustainable development framework
National Development strategies / plans		
Plan National de Développement 2016-2020	2016	reinforce governance and institutions capacities Preserve environment and manage natural resources to attenuate climate change Promote regional integration

Plan National de Développement 2021-2025		Consistency with pillar related to Strengthening social inclusion. Regional development and support to infrastructure Ministry partners whom follow the 2021-25 NDP in Côte d'Ivoire have been involved in the AF project design, thus alignment with national development priorities is ensured
Stratégie nationale de developpement durable	2011	Aims at establishing harmony between environment, economy and social while ensuring a quality of life throughout the territory and in all sectors of activity. Integrate the principles of sustainable development in the management of territorial collectivities Integrate sustainable development into spatial planning
Territorial Development Policy Framework	2006	This framework defines the allocation of competences and the empowerment of cities and regions and establishes the principle od concerted development land use plans and local development plans
Environmental strategies / plans		
Code de l'environnement	1996	Governs all actions related to environmental management. Consider sustainable development issues, coastal erosion, climate change impacts
Code Forestier	2019	Supervise national forest management adapted to fight against climate change Prioritize vulnerable areas and marine ecosystems such as mangrove reforestation
National Policy on Forest Preservation, Rehabilitation and Expansion.	2018	Aims to achieve the preservation of biodiversity; the maintenance of favorable climate for the developmentof socio-economical activities and agricultural area; and the respect of Côte d'Ivoire's international commitments. In parallel, the four objectives settled for the policy are: preservation of biodiversity; National Climate Conducive to agricultural activities and living conditions; Compliance with international commitments; and Social & economic development.
Sectoral strategies / plans		
Code de l'eau	1995	To preserve marine ecosystems and wetlands To protect against all forms of pollution and floods To restore water surface Protection against inundation Fisheries agriculture
National REDD+ Strategy of Côte d'Ivoire,	2017	The vision of the Ivorian government through the REDD+ mechanism is to stabilize and sustainably reverse the trend of natural forest loss from 2017 and to simultaneously restore forest cover in a progressive manner to reach 20% forest cover by 2030.
National Second Generation Agricultural Investment Program (PNIA II, 2017-2025)	2017	Defines the development actions needed to reduce the incidence of poverty at the national and rural levels, based on an in-depth analysis of the pace of growth of the economy in general, and the agricultural sector in particular
Sub-national plans		
Agenda 21 Grand Bassam	2017	Instrument established for the management of natural resources and the preservation of the environment Establish environmental actions plan at commune and national level to promote sustainable development
Appui à la préparation de plan d'investissement multisectoriels IDA-17 et du plan d'investissement pour la ville de Grand-Lahou, République de Côte d'Ivoire.	2017	To strengthen capacity and skills of stakeholders Promote participatory socio-economic development and blue green development Organize operational governance for integrated resource management