REQUEST FOR PROJECT/PROGRAMME FUNDING FROM THE ADAPTATION FUND

Enhancing the resilience inclusive and sustainable eco-human settlement development through small scale infrastructure interventions in the coastal regions of the Mekong Delta

UN-HABITAT
FOR A BETTER URBAN FUTURE

The Adaptation Fund Board Secretariat
1818 H Street NW
MSN P4-400
Washington, D.C., 20433
U.S.A
Fax: +1 (202) 522-3240/5
Email: afbsec@adaptation-fund.org

ADAPTATION FUND

PROJECT/PROGRAMME PROPOSAL TO THE ADAPTATION FUND

PART I: PROJECT/PROGRAMME INFORMATION

Project/Programme Category:	Regular
Country/ies:	Vietnam
Title of Project/Programme:	Enhancing the resilience inclusive and sustainable eco-human settlement development through small scale infrastructure interventions in the coastal regions of the Mekong Delta
Type of Implementing Entity:	Multilateral
Implementing Entity:	United Nations Human Settlements Programme (UN-Habitat),
Executing Entity:	
Amount of Financing Requested:	$ 5,754,840

Project Summary

The main objective of the proposed project is **"to enhance the resilience, inclusive and sustainable eco-human settlement development through small scale infrastructure interventions in the coastal regions of the Mekong Delta in Vietnam."** To align with a government request to promote sustainable eco-human settlement in Vietnam, this project aims to improve the poor and vulnerable communes that climate change impacts have affected the most. It is structured around the following components:

Component 1: Institutional and community capacity building toward eco-human settlement development to support enhancement of local climate response actions (USD 800,000 / **16.7**%)

Component 2: Development of action plan and strategy for eco-human settlement, and integrating into planning and policy with participatory approach (USD 700,000 / **14.6**%)

Component 3: Sustainability built through small-scale protective and basic service infrastructure (USD 3,100,000 / **64.5**%)

Component 4: Awareness Raising and Knowledge Management (USD 200,000 / **4.2**%)

A. Project Background and Context:

Socio-Economic Context

Despite its rapid growth on both economic and social context, Vietnam is one of the world's most vulnerable countries to climate change impact, including but not limited to; sea level rise, longer and more severe droughts, flooding and tropical cyclones; as is typical with climate change in this region the poorest are the most exposed. By 2050, a 1–3% loss in real GDP is predicted from climate change impacts. Natural disasters have caused average annual economic losses estimated to be at 1–1.5% of GDP over the last two decades, while more than 70% of the population is already exposed to significant natural hazard risk. Ongoing climate disaster events and climate change effects can also set back development gains, particularly as safety net programs have not yet been adapted to support the poor and vulnerable in response to natural hazard shocks.

Mekong Delta is however, the largest producer of agricultural and aquaculture product in Vietnam and is suffering the most in economic loss due to Climate Change Impact. The Labor force found in Mekong delta is around 10.3 million (out of a total national labor force of 54.5 million). It is also responsible for more than 13% of national GDP solely for the fishery industry (Vietnam net, 2016). The Mekong Delta currently has an increasing economic rate of around 11% of GDP annually. In this economic context, climate change issues have a major effect on economic activities in the region, while local residents are exposed to climate change threats it has also presented new opportunities, especially in the coastal region of the Mekong delta.

Environmental Context

River and ground water:
In the Mekong Delta, river water and ground water levels are decreasing, while sea levels, flood tides and salt intrusion are on the rise, the demand for water has also increased in production and daily activities due to industrialisation, urbanisation and population growth.

Assessments made in the Greater Mekong Sub-region over the last 30 years have revealed the great potential of the groundwater resources in the region, including trans-boundary aquifers. However, groundwater resource usage, emerging environmental problems and the priorities for water resource management differ for each country, this is partly due to variations in levels of development and populations. A growing number of countries in the Mekong River Basin are experiencing depleted and degraded freshwater supplies because of population growth and climate change.

The extraction of groundwater has increased rapidly over the past decades and forms one of the main causes of saline water intrusion into the coastal aquifers. This intrusion has been accelerated by the on-going sea level rise. Saline intrusion of groundwater in the Vietnamese Mekong Delta is a highly complex issue as it heavily depends on varying factors, including changes in water supplies and rising water demands (e.g. the amount of fresh groundwater extracted for different purposes like domestic, agriculture and aquaculture use).

Land erosion and degradation:
It is estimated that the Mekong Delta may lose up to half of its land to erosion due to current rampant levels of sand exploitation. 562 erosion locations have been identified with a total length of 786 kilometers in the Mekong Delta. This includes 55 critically endangered locations that are 173

kilometers in length, 140 endangered locations at 97 kilometers in length, and 367 normal erosion spots 516 kilometers long.

Figure 1. The images of land erosion in the Mekong Delta

Due to rising sea levels, provinces in the coastal zone are highly affected by salinity intrusion and flooding. Salinity intrusion varies according to micro-climate conditions such as water flow intensity. The provinces affected with a maximum salinity concentration of 10g/L are all provinces situated in the coastal zone: LongAn, TienGiang, BenTre, TraVinh, KienGiang, SocTrang, BacLieu, CaMau (source: The World Bank, 2016). Moreover, flooding issues continually change the quality and quantity of water sources, leading to changes in ecosystem and increases in the overall number of migrating people.

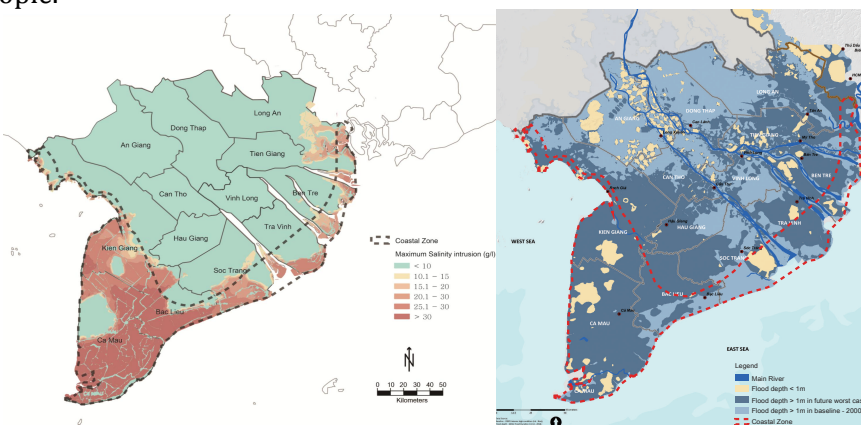


Figure 2. Salinity intrusion and flooding maps

Drought:

In 2016 and 2017 dry season, a record drought in the Mekong Delta region, followed by saltwater intrusion, cost Vietnam VND 15 trillion ($669 million) due to the heavy toll on agricultural production. It also caused dire humanitarian and other economic impacts: almost half a million households lacked fresh drinking water and experienced food shortages and thousands of affected people had to migrate to urban areas in search of jobs.

Most of the affected provinces of the Delta have begun to secure freshwater by all measures available to them. In many vulnerable communes in Hau Giang, Ben Tre, and Tien Giang provinces, farmers have used water tanks to collect rain-water and drilled wells to extract groundwater. They also have reduced the annual rice crop and switched to cash crops that require less water.

The drought and SWI may make it harder for Vietnam to meet its targets under the Socio-economic Development Plan (SEDP) 2016–2020. These targets include a gross domestic product (GDP) growth rate of 6.5–7.0% a year, and a reduction in the share of poor households by an average of 1.0–1.5% a year. The impact of adverse climate conditions on the economy is already evident: in the first half of 2016, GDP growth was recorded at 5.5%, much lower than the 6.5% average growth in 2015. The World Bank accordingly lowered its 2016 growth projections from 6.5% down to 6.2

percent. The average GDP growth was recorded at 6.2% for 2016, below the government's 6.7% target.

Like past floods and typhoons, the prolonged drought and SWI of 2015–2016 have hurt people's livelihoods and assets, making it difficult for affected households to bounce back and recover. Although disasters do not discriminate, poor and near-poor households are often more exposed to and disproportionately affected by the impacts of disasters. Other disproportionately affected groups include women and ethnic minorities

Table 1. Overview of Damage Impact of 2015-2016 Drought and SWI in Vietnam

Region	Number of Severely affected Provinces	Production area affected (ha)			Number of Household lacking access to water for consumption and daily use	# of livestock lost	Total Economic loss (billion VND)
		Rice	Crop	Aquaculture			
National	18	243,762	168,064	69,008	457,796	-	15,023
South Central Coast	3	10,776	15,000	-	43,482	5,126	1,457
Central Highlands	5	17,541	141,756		72,060	494	6,004
Mekong Delta	10 out of 13 (IncludingTra Vinh and Bac Lieu	215,445	-	68,916	342,254	933	7,517

Source: MARD 2016

Climate Change Projections and Expected Impacts

Climate Change Projections:

According to IPCC (2013), climate change projections for Vietnam include:

- Annual mean temperatures will continue to rise by 0.1-0.3°C per decade, and the number of days with temperatures above 33°C will increase;
- The number of cooler days with temperatures below 15°C will drop by two to three per year;
- The dry season will get longer;
- There will be more intense rainfall events, and more frequent and severe droughts and floods; and,
- Maximum monthly flows in the Mekong Basin will increase by 35-41%, while minimum monthly flows will drop by 17-24% by 2100, further exacerbating flood and drought risks.

Climate change projections for Vietnam from IPCC report (2013) show that the southernmost provinces, especially the Mekong Delta Region in particular, will experience increases in temperature resulting in more droughts in the dry season and a slight increase in rain during the wet season. On the other hand, rainfall from the central or northern provinces will lead to increased flood risk in the southern provinces.

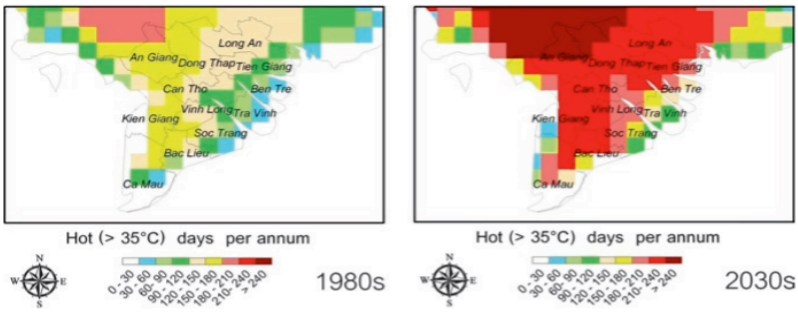


Figure 3. Hot period (number of hot days in a year) in the Mekong River Delta in the 1980s and 2030s (simulated)

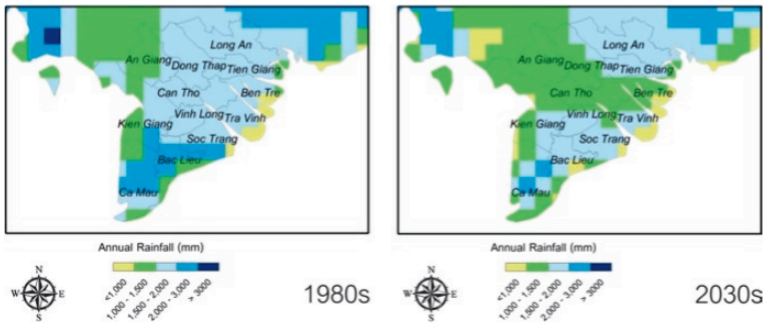


Figure 4. Annual precipitation in the Mekong River Delta in the 1980s and 2030s (simulated)

From figures 3 and 4, it can be observed that the changes in the average temperature and annual rainfall in Mekong Delta vary from province to province. this will increase the frequency of extreme weather events such as floods and droughts and result in rising sea levels with the potential to inundate land or increase salinity.

- ❑ According to the RCP4.5 scenario, the average annual temperature will likely increase by 1.3 to 1.4°C in the mid-21st century and by 1.7 to 1.9°C at the end of the 21st century;
- ❑ According to the RCP8.5 scenario, the average annual temperature will likely increase by 1.8 to 2o C in the mid-21st century and 3.4 to 3.6 at the end of the 21st century;
- ❑ The average maximum temperature increases higher than the average minimum temperature and the increasing trend gradually reduces from northern to southern regions of the Mekong Delta;
- ❑ Annual precipitation is likely to decrease by 10–20% in the future throughout the Delta area;

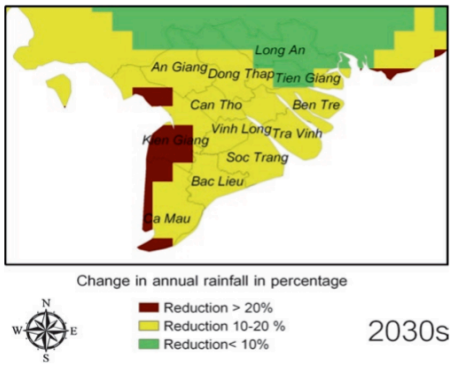


Figure 5. Comparison of change in annual precipitation in the Mekong River Delta between the 1980 and 2030

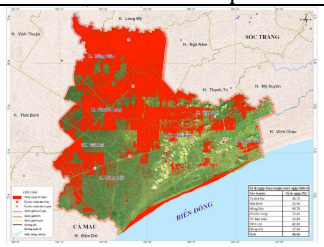
Table 2. Climate Change Projections in Bac Lieu and Tra Vinh

Province	Climate Change	RCP 4.5 scenario			RCP 8.5 scenario		
		2016-2035	2046-2065	2080-2099	2016-2035	2046-2065	2080-2099
Bac Lieu	Change in average annual Temperature	0.7 (0.4-1.3)	1.4 (1.0-2.0)	1.8 (1.2-2.5)	0.8 (0.6-1.2)	1.8 (1.4-2.5)	3.3 (2.7-4.2)
	Change in annual rainfall (%)	9.6 (5.0-13.9)	11.0 (2.3-20.5)	13.6 (4.3-22.8)	11.8 (6.4-18.0)	16.5 (10.1-23.3)	18.0 (8.5-29.0)
	Change in spring rainfall (%)	8.4 (-3.3÷19.9)	-5.8 (-16.8÷4.7)	9.9 (-7.9÷25.7)	-0.5 (-10.2÷8.6)	-0.1 (-6.8÷6.4)	2.0 (-10.8÷15.5)
	Change in winter rainfall (%)	2.2 (-2.8÷6.7)	3.8 (-4.2÷12.4)	7.8 (-0.1÷15.1)	5.7 (1.3÷10.7)	9.6 (2.2÷16.8)	12.7 (2.6÷22.5)
Tra Vinh	Change in average annual Temperature	0.7 (0.4-1.2)	1.4 (1.0-2.0)	1.8 (1.2-2.6)	0.8 (0.6-1.2)	1.9 (1.4-2.6)	3.4 (2.7-4.5)
	Change in annual rainfall (%)	10.9 (4.9-16.3)	15.7 (5.7-26.8)	17.7 (4.1-30.0)	11.4 (5.6-17.5)	14.6 (8.4-21.5)	18.2 (9.0-28.2)
	Change in spring rainfall (%)	10.9 (-0.5÷21.8)	0.9 (-14.4÷15.5)	7.9 (-5.0÷19.5)	4.9 (-5.2÷14.7)	1.6 (-6.7÷9.9)	2.0 (-9.2÷13.7)

	Change in winter rainfall (%)	4.2 (0.4÷8.2)	3.6 (-4.5÷11.6)	5.2 (-0.2÷10.6)	6.8 (2.5÷11.4)	8.5 (2.8÷13.9)	11.2 (3.5÷18.8)

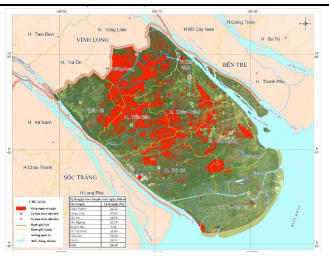
Table 2 shows the climate change projections for change in average temperature and change in annual rainfall trends in Bac Lieu and Tra Vinh in Mekong Delta Region, and this would be one of the main causes of drought and flood. Figure 5 also shows that the change in annual precipitation in the Mekong Delta will decrease by 10-20% in average. Bac Lieu and Tra Vinh province is predicted to be highly affected by drought in the future.

Table 3. Land Erosion map and data for Bac Lieu and Tra Vinh



Bac Lieu

District	Area (ha)	Inundation Percentage (% area) corresponding to rising sea level						
		50cm	60cm	70cm	80cm	90cm	100cm	200cm
Gia Rai Town	35506	1.43	3.01	7.54	15.48	31.27	48.71	98.88
Hoa Binh	36735	2.28	4.78	6.97	11.74	18.87	33.96	96.15
Hong Dan	44050	10.70	22.48	41.24	59.51	72.66	90.78	95.79
Phuoc Long	42346	4.32	9.07	20.95	37.25	54.56	73.45	99.40
Bac Lieu City	15920	0.67	1.40	2.64	4.99	8.81	14.80	84.63
Vinh Loi	25267	1.54	3.23	6.58	12.71	23.88	43.83	97.87
Dong Hai	56111	1.68	3.54	5.09	7.12	10.45	17.98	90.81
Province	**252600**	**3.65**	**7.65**	**14.54**	**23.37**	**33.78**	**48.60**	**95.29**



Tra Vinh

District	Area (ha)	Inundation Percentage (% area) corresponding to rising sea level						
		50cm	60cm	70cm	80cm	90cm	100cm	200cm
Chau Thanh	34552	11.99	12.09	12.29	12.36	16.04	21.23	94.15
Cang Long	29438	9.12	10.87	13.66	18.69	32.95	50.02	90.29
Cau Ke	24635	0.55	1.04	2.13	4.46	8.98	14.05	96.29
Cau Ngang	32494	11.36	12.63	13.42	15.07	19.07	20.30	93.07
Duyen Hai Town	51268	5.39	5.48	5.56	5.64	5.69	3.41	78.96
Tra Vinh City	6755	7.61	7.82	7.91	8.08	8.87	10.66	72.48
Tieu Can	22776	0.53	1.47	4.71	9.73	25.40	59.30	91.34
Tra Cu	37667	1.64	2.67	4.56	7.09	11.60	18.31	98.35
Province	**234120**	**6.20**	**6.97**	**8.16**	**10.34**	**16.20**	**23.30**	**94.03**

According to table 3, the figures and tables from Tra Vinh and Bac Lieu province show the risk of land erosion as sea-level rises by different levels in each province.

Expected Impacts:

Due to extreme natural hazards from the impact of climate change, human settlement and ecosystem in Vietnam are becoming devastated, securing access to clean water is also becoming an urgent priority. Climate change impacts such as rising temperature, changing rainfall patterns and sea level rise are posing new and bigger risks to human settlement and the environment in this region. The result is that human settlement will be increasingly vulnerable to climate change and extreme natural hazards as they are generally located in high risk areas, typically along riverbanks and in costal lands.

The issues of climate change caused the further degradation of several environmental problems; floods; drought; rainfall pattern change; and salinity intrusion. These environmental problems result in malignant changes in ecosystem, forced migration and also disturb livelihood strategies and resources management.

Table 4. Impact of Climate Change on Human Settlement and Ecosystem

Climate Change Impact	Human Settlement	Eco-system (Environment)
High Temperature	Health issue Reduce the productivity on agriculture	Intensify disaster Drought
Drought	Lack of water for drinking and agriculture Transit of main source of income	Salinity Intrusion
Sea Level Rise	Migration due to lack of human settlement Transit of main source of income	Threat to bio diversity Floods

Salinity Intrusion	Lack of Fresh and safe water for drinking and agriculture Transit of main source of income	Threat to biodiversity
Rainfall Pattern Change	Unexpected flood and storm Reduce the productivity on agriculture	Threat to bio diversity Intensify disaster; flood, drought

Focus of the Proposal

This proposal has mainly focused on ***'enhancing the resilience, inclusive and sustainable eco-human settlement development through small scale infrastructure interventions in the coastal regions of the Mekong Delta in Vietnam.'*** Based on the vulnerability assessment frame work and analysis on relevant projects in the province, Bac Lieu and Tra Vinh are selected as the most vulnerable provinces in the Mekong Delta. In these provinces, a number of communes have been identified as our project site due to the reasons as follows:

The project will focus its actions on highly vulnerable human settlements in Bac Lieu and Tra Vinh province of the Mekong Delta to achieve its above objective. The selected communes are a combination of the most vulnerable human settlements to climate change impact in the selected regions. In Bac Lieu and Tran Vinh, the targeted project site will be 4 communes – Vinh Hau, Vinh Trach Dong, Hoa Minh, and Long Hoa with total 26,099 beneficiaries (See Appendix 1)

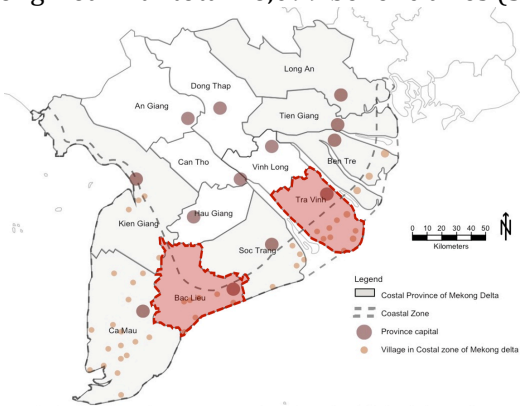


Figure 6. Project Site Location

1. Analysis of current situation of the project site

a. Bac Lieu Province

1) Huu Nghi Hamlet, Vin Trach Dong Commune, Bac Lieu town District

Direct Beneficiary (number of household): 4-500people (80-100 households)
Minority group: Majority of population is Khmer (Ethnic minority)
Infrastructure level: low, detailed in the contents
Livelihood Resources: fishing, haunting, aquaculture (failed)
Income level: low
Education level: elementary school or secondary school
Feature: Huu Nghi commune is newly built commune in 2013 for the migration from the coastal region due to climate change impact. Government provided social housing for migrants but the infrastructure and housing condition is still low.

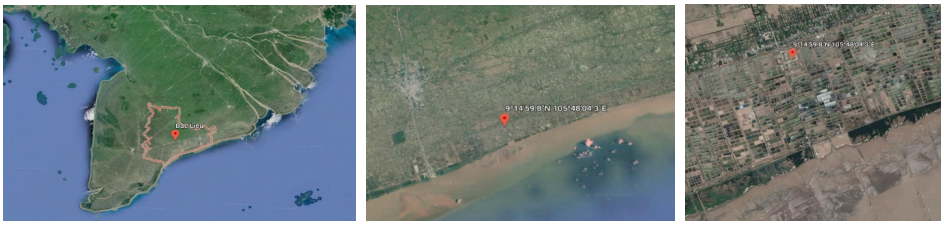


Figure 7. Location of Huu Nghi commune in Bac Lieu

- Water Management:

In Huu Nghi commune, a public water tank and water drainage system has been facilitated, however, the quality of water is not secured with TDS 1,100. According to the government official in Bac Lieu, once they installed the public water tank, there was no proper management of the facility, due to the lack of the management, the water tank no longer functions adequately. The water drainage system in Huu Nghi commune is covered by waste. The water from each household flows through this water drainage without any treatment.


Figure 8. Water tank in the community

- Housing Condition:

The houses in Huu Nghi commune has been provided by Government in 2013 when the commune newly built for the migrants. Most of the houses are semi-detached building used by two households and the public toilet is shared with the other households.


Figure 9. House alignment and public bathroom

- Waste Management:

According to the figure 10, there is no waste management system in Huu Nghi commune. People tend to use the ponds or the aquafarming area as the dumping area and it leads to further water pollution. Waste treatment system can have positive link to water drainage system in the villages and this would benefit 264 people in the villages


Figure 10. Waste Management

❑ Livelihood Resources:

People in Huu Nghi commune still commute every day for 4-5km from their formal residential area, to their daily livelihood. Since the average education level in Huu Nghi commune is elementary school and secondary school, most people from the coastal region rely on fishing and hunting. Even though the government has provided farming land for shrimp farming, the former distribution hasn't been formulated. Due to lack of planning, the farm has been abandoned.

2) 14 Hamlet(including formal residential area), Vinh Hau Commune, Hoa Binh district

Potential Direct Beneficiary: around 400 people (will be settled in early 2019)
Infrastructure level: none
Feature: Former residential area has been affected by climate change impact, especially sea level rise, around 400 people are planned to move to 14 hamlet in early 2019. The government will provide social housing just like the Huu Nghi commune above.
Expected Challenge: 14 Hamlet might face similar challenges that Huu Nghi has faced since 2013 including insufficient plan for commune, lack of livelihood resources, water security, and insufficient waste management systems.

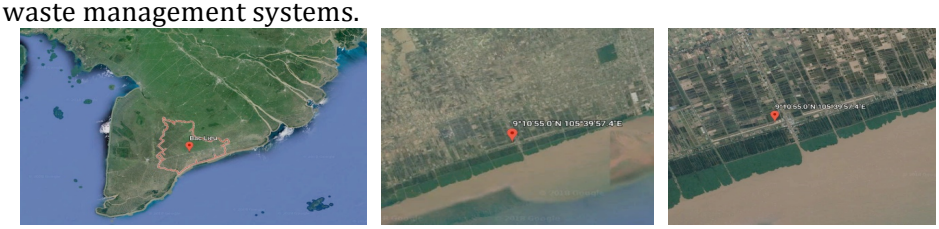


Figure 11. Location of 14 hamlet in Bac Lieu

❑ Former residential area (Climate Change impacted area):

Around 400 residents living in the vulnerable community are about to migrate to 14 hamlet in early 2019. This migration is due to the impact of climate change, especially sea level rise. The government has decided to build the new commune for 400 residents in this area.

Figure 12. Housing condition in vulnerable community

Current living condition in the vulnerable community is poor as shown in figure 12. Residents in the area are also suffering from the lack of fresh water for drinking and living.

❑ Potential resettlement area:

The potential resettlement for the residents of the vulnerable area is 14 hamlet located in Vinh Hau Commune. The plan for migration from the local government is to begin in early 2019, however, basic infrastructure is yet to be provided to 14 hamlet. According to figure 13 below, the condition of infrastructure is low. Taking into account the timing for the migration, provision of good-conditioned infrastructure is urgent.

In the circumstances described above, 14 hamlet is likely to suffer from the same challenges that Huu Nghi commune has been facing since 2013 including fresh water scarcity, lack of livelihood

resources and waste management. A covered well, water restoration, rainwater capture, drainage systems will benefit the most of inhabitants in the villages.

Figure 13. Infrastructure in the potential resettlement area

b. Tra Vinh Province

1) Long Hoa commune, Chau Thanh District

Direct Beneficiary (number of household): 10,280people (2,547 households)
Infrastructure level: low, detailed in the contents
Livelihood Resources: Agriculture-aquaculture 81.26%
Income level: 37.5 million VND/year per capita
Poverty rate: 12.21%
Households lacking access to clean water: 2,182 (85.67%)
Feature: 136 households in Con Phung village needs resettlements; 2 houses have been destroyed and 5 houses lost their roofs because of tornadoes; water level rise, combined with tide destroyed the shore of 69 shrimp ponds, and 650m of dyke is in risk of land erosion;

Figure 14. Location of Long Hoa

❑ Water Management:

In Long Hoa, people are suffering from lacking of fresh water for drinking and living. Although the government has provided with the rainwater storage tank, only 20% of population living in the center of Long Hoa are currently covered by said tank. The rest of population have to collect rain water individually for their own living and drinking. People also use water pump's in their own household, but the quality of water from the ground is not sufficient for using as drinking water or water for living.

According to local people, it is common in Long Hoa to use the waterway as the toilet. As people use the waterway as a toilet, and the water pump for living, the untreated water can be used by local people. A sufficient sanitation system and water management system should be provided in unison. These systems will benefit total approximately 4176 people.

Figure 15. Water pumping system in the household

❑ Waste Management:

According to DONRE in Tra Vinh, there is no proper waste management system or plan in Long Hoa. The absence of a water management system or proper plan leads to the situation that solid waste is abandoned on the road and in the forest. Approximately 1000 people in the commune will have benefit from the waste treatment system and management.

People also burn the waste from their household in the public space such as the forest near their house. This type of burned-out area is easily spotted in Long Hoa commune. According to the current waste management in Long Hoa, raising people's awareness about waste management is an urgent priority.

Figure 16. Waste management

❑ Land Erosion:

Since Long Hoa is located in the lower part of the main island in Chau Thanh district, land erosion from sea level rise is the most severe challenge related to climate change impact. As seen in the previous figure (See the Figure 1), no protection is currently provided to prevent land erosion along the coast and waterways. Eco-friendly land protection system will provide the benefit to approximately 4200 people in the commune.

2) Hoa Minh commune, Chau Thanh District

Direct Beneficiary (number of household): 14,919 people (3,309households)
Infrastructure level: low, detailed in the contents
Livelihood Resources: Agriculture - aquaculture (82%)
Income level: 41.8 million VND/year per capita
Feature: Huu Nghi commune was newly built in 2013 for the migrants from the coastal region due to climate change impact. The government provided social housing for the migrants but the infrastructure and housing condition is still low.

Figure 17. Location of Hoa Minh

In Hoa Minh Commune, for providing water treatment, rainwater capture, waster restoration, and a covered well system will benefit approximately 4700 people, and land erosion can be protected with eco-friendly land restoration and protection system, and this can benefit approximately 5200 people in the Commune.

❑ Housing condition:

In Hoa Minh, many houses are located along the river way without climate change impact resilience design. People are at risk from damage associated with local flooding.

Figure 18. House along the waterway

❑ Basic Infrastructure:

In the whole island in Chau Thanh District, there are approximately 100 bridges over the waterway. More than 80% of them are made with wood and are not resilient against climate change impact. When heavy storms come, the wooden bridge can easily collapse. The collapse of basic infrastructure such as bridges will inevitably lead to increased vulnerability of the local community. Approximately 80 bridges would be upgraded and more than 160 households and 800 people will have benefits.

Figure 19. Wooden bridge

❑ Land Erosion:

Due to the geographical location of Hoa Minh on the island, there are many waterways throughout the commune. Along the waterways, the ecosystem and the available land is threatened by erosion. Mangrove plantation is not sufficiently provided in the area to protect the coast and river banks from erosion.

2. Natural Hazard

With the exception of 2016 and 2017 when drought severely affected the Mekong Delta Region, generally storms and flooding are the most frequent disasters (storm: 52%, flood: 42% of the total number of disasters). The classification of risk from natural disaster in Vietnam is as follows:

Table 5. Natural Disaster Risks in Vietnam

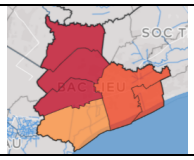
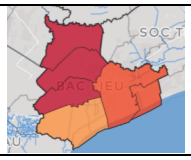
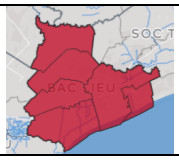
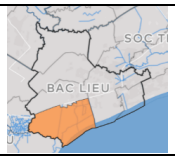
High Risk	Medium Risk	Low Risk
Flood	Hail rain / Tornado	Earthquake
Typhoon	Drought	Accident (Technology)
Inundation	Landslide	Frost
	Flash Flood	Damaging Cold
	Deforestation	

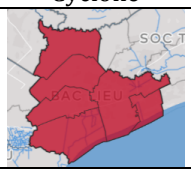
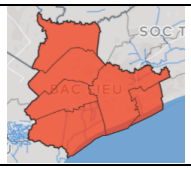
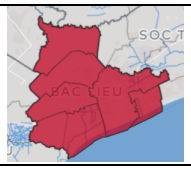
Source: The World Bank, Vietnam "Increasing Resilience to Climate Change and Natural Hazard"

a) Exposure to natural hazard in Bac Lieu:

In Bac Lieu, the natural hazards with the worst effects on the region are river flood, urban flood, coastal flood, cyclone, wild fire. Extreme heat is classified as medium level hazard while earthquake, Tsunami and water scarcity are defined as low level hazard.

Table 6. Exposure to natural hazard in district of Bac Lieu

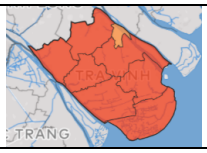
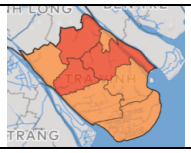
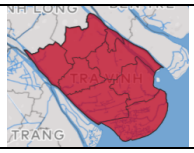
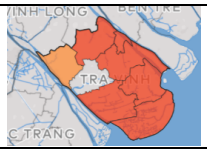
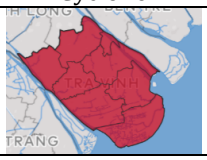
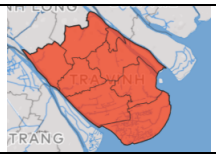
River Flood	Urban Flood	Coastal Flood	Earthquake	Tsunami
				

Volcano	Cyclone	Water Scarcity	Extreme Heat	Wild Fire
				

b) Exposure to natural hazard in Tra Vinh:

In Tra Vinh, the natural hazards with the greatest effect on the region are coastal flood, cyclone, wild fire. River Flood, Urban Flood, Tsunami and extreme heat are classified as medium level hazard while earthquake and water scarcity are defined as low level hazard.

Table 7. Exposure to natural hazard in district of Tra Vinh

River Flood	Urban Flood	Coastal Flood	Earthquake	Tsunami
				
Volcano	**Cyclone**	**Water Scarcity**	**Extreme Heat**	**Wild Fire**
				

Through the vulnerability assessment, the exposure to natural hazard, and finding gaps and making synergy with other projects, the proposed project has identified 2 communes from Bac Lieu and Tra Vinh for the project site.

B. Project Objectives:

Main Objective

The main objective of the proposed project is **"to enhance the resilience, inclusive and sustainable eco-human settlement development through small scale infrastructure interventions in the coastal regions of the Mekong Delta in Vietnam."** To align with a government request to promote sustainable eco-human settlement in Vietnam, this project aims to improve the poor and vulnerable communes where climate change impacts have the greatest affect. It is structured around the following components below:

- ***Component 1:*** Institutional and community capacity building toward eco-human settlement development for supporting to enhance local climate response actions
    - This is in line with AF outcome 1: Reduce exposure and vulnerability to climate-related hazards and threats with a particular view to community level resilience
    - AF outcome 2: Strengthened institutional capacity to reduce risks associated with climate-induced socioeconomic and environmental losses
- ***Component 2:*** Development of action plan and strategy for eco-human settlement, and integrating into planning and policy with participatory approach
    - This is in line with AF outcome 3: Strengthen awareness and ownership of adaptation and climate risk reduction processes and capacity

- AF outcome 7: Improved policies and regulations that promote and enforce resilience measures

- ***Component3:*** Sustainability built through small-scale protective and basic service infrastructure
  - This is in line with AF outcome 4: Increase adaptive capacity with relevant development and natural resource sectors
  - AF outcome 5: Increase ecosystem resilience in response to climate change and variability-induced stress
  - AF outcome 6: Diversified and strengthened livelihoods and sources of in-come for vulnerable people in targeted area
- ***Component4:*** Awareness Raising and Knowledge Management
  - This is in line with AF outcome 3: Strengthen awareness and ownership of adaptation and climate risk reduction processes and capacity

C. Project Components and Financing:

Table 8. Project Components

Project Components	Expected Outcomes	Expected Concrete Outputs	Amount (US$)
1. Institutional and community capacity building toward eco-human settlement development for supporting to enhance local climate response actions	1.1 Increase awareness on resilience of human settlements and ecosystem as a result of enhanced institutional capacity in development of eco-human settlement strategy and action plan 1.2 Strengthened knowledge of adaptation and climate risk reduction processes and capacity	1.1 Capacity building support provided to national government and local authorities to increase the resilience of human settlement and ecosystem 1.1.1 Guidance and training materials development for vulnerability and risk assessment at local levels 1.1.2 Planning tools and training materials development for planning approach, strategy and action plan development 1.1.3 National Induction Workshop / Project team (facilitators) training enabling facilitation of eco-human settlement strategy and action plan development 1.1.4 Training workshops, enabling national/provincial/district/commune to set up eco-human settlement strategy and action plan development for climate change adaptation	800,000 (16.7%)
2. Development of action plan and strategy for eco-human settlement, and integrating into planning and policy with	2.1 Provincial/district/commune level's action plan and strategy for eco-human settlement will be developed based on locals' needs 2.2	2.1 Comprehensive workshops for integrating the eco-human settlement strategies and plans (National, province, district and commune) 2.1.1 Development of action plan and strategy for eco-human settlement at	700,000 (14.6%)

participatory approach	Policy framework for integrating climate action and strategy into planning will be developed	provincial/district/commune levels 2.1.2 Integrating developed/revised action plan and strategy into planning and policy 2.1.3 Policy framework development for integrating locals' action plans and strategies for eco-human settlement into planning	
3. Sustainability built through small-scale protective and basic service infrastructure	3.1 Increased community adaptive capacity with climate resilient and development sectors, and increase ecosystem resilience in response to climate change 3.2 Enhanced locals' capacity for management and operation of provided infrastructures	3.1 Vulnerable assets strengthened, new sustainable assets constructed (Sectorial approach): climate-resilient infrastructure: i.e. bridge, housing, and ecosystem 3.1.1 Small-scale water desalination and purification system built to provide clean and safe water for both living and agriculture (Water) 3.1.2 Eco-friendly infrastructure to prevent land degradation/erosion (Eco-system based) 3.1.3 Climate resilience housing upgrade (Housing) 3.1.4 Climate resilient physical infrastructure (Bridge) 3.2 Capacity building workshops for management and operation of provided infrastructures 3.2.1 Development of Working Group or governance for management and operation for provided infrastructure	3,100,000 (64.5%)
4. Awareness Raising and Knowledge Management	4.1 Project implementation is fully transparent. All stakeholders are informed of products and results and have access for replication;	4.1.1 Lessons learned and best practices regarding resilient urban community development/housing are generated, captured and distributed to other communities, civil society, and policy-makers in government appropriate mechanisms 4.1.2 Regional advocacy and replication and replication for developing the effective policy	200,000 (4.2%)

		framework	
5. Project Activities			4,800,000
6. Project/Programme Execution cost			504,000
7. Total Project/Programme Cost			5,304,000
8. Project/Programme Cycle Management Fee charged by the Implementing Entity (if appreciable)			450,840
Amount of Financing Requested			**5,754,840**

D. Project Calendar:

Table 9. Project Calendar

Milestones	Expected Dates
Start of Project/Programme Implementation	01-2020
Project/Programme Closing	01-2024
Terminal Evaluation	03-2023

PART II: PROJECT / PROGRAMME JUSTIFICATION

A. The Project Components

The target areas chosen for the project are characterised by high levels of exposure to severe climate change risks, especially sea-level rise, salinity intrusion, drought, land erosion and rainfall pattern change. Climate sensitivity is underpinned by rapid urbanization and population growth, underlying vulnerabilities (poverty, limited access to basic services, gender inequalities, weather dependent livelihoods, environmental and ecosystem degradation) and limited adaptive capacity at household, community and governance level.

In order to achieve the overall project objective, "to enhance the resilience, inclusive and sustainable eco-human settlement development through small scale infrastructure interventions in the coastal regions of the Mekong Delta in Vietnam", the project takes a comprehensive and holistic approach, which combines a number of horizontally and vertically interrelated resilience approaches towards the strengthening of institutions, communities, ecosystems and physical, natural and social assets. This supports the integrated approach to improving knowledge of climate resilience and strengthening basic service infrastructure through improved capacity, better local-level planning and community-level implementation in the coastal regions of the Mekong Delta in Vietnam.

The action taken by this project will be targeted to benefit the most vulnerable people in the coastal regions of the Mekong Delta in Vietnam. To do this, a combination of soft and hard measures is proposed to ensure that resilience at the household and commune level is strengthened sustainably for resilience building that responds to current and future needs.

Soft measures include institutional and community capacity building and action plans, these are designed to target the most vulnerable settlements and to design and implement the most necessary actions, to improve capacity at commune and district level. It will also aim to sustain these actions and replicate them elsewhere through the development of better planning practices

which will mobilise national and international finance. Hard measures will comprise of investments in small-scale protective and basic service infrastructure and natural assets designed to increase people's resilience. With a strong mix of soft and hard interventions, it is anticipated that local resilience at household, community and human settlement level will be sustainably strengthened.

Whilst the planned interventions are strongly rooted in national and local priorities the reshaped global development and climate change agenda provides further guidance. In particular, Sustainable Development Goal (SDG) 11 (and several of its targets); Make cities and human settlements inclusive, safe, resilient and sustainable, and Goal 6, (and its targets), Ensuring availability and sustainable management of water and sanitation for all will be addressed by the project. The New Urban Agenda which emerged as an outcome of the Third United Nations Conference on Housing and Sustainable Urban Development (Habitat III, in Quito, October 2016) will also be utilised as a framework to guide this the project.

The specific needs of women, people with disabilities and youths will be considered at all stages of the project. This will be achieved through engaging representatives of these vulnerable groups in community and stakeholder consultations in the planning process, through a community-based approach and through the people's process – where community groups are formed and sustained throughout all stages of the project and through which communities participate in project implementation and monitoring[1].

The components of the project are as follows:

Component 1: Institutional and community capacity building toward eco-human settlement development for supporting to enhance of local climate response actions

In line with AF outcome 1 and 2 with national government priorities (See Section D) this component will focus on reducing the exposure and vulnerability to climate change risk through the development of holistic planning and strategies for eco-human settlement and institutional capacity building.
The aim of the activities in Component 1 is to support the capacity building of government officials and practitioners in order to enable them to set up an eco-human settlement strategy and climate change action plan.

1. Existing tools for planning for eco-human settlement strategy and climate change action plan will be reviewed, and the guidance and training tools will be developed in English and Vietnamese. These guidance and training tools will be reviewed by governmental officials and practitioners. For effective implementation, the guidance and training tools will be applied in the pilot training workshop with practitioners.
2. In the implementation, the training workshop will initially be held at national and provincial levels. In these activities, talented practitioners and trainers will be identified and trained for the community level training and action-planning workshop at local level. The outcome of the national and provincial level workshops will be enhanced cross-sectorial coordination. This is a critical aspect of the eco-human settlement strategy and action plan development. Climate change is a crosscutting issue, thus horizontal and vertical coordination will be necessary. National and provincial levels' trainings and workshop will help to increase the coordination of eco-human settlement planning.

[1] Development driven by people/Support Paradigm: when people stays at the center of development planning process, the resource can be optimized with greater utility impacting larger number of people: http://sopheapfocus.com/wp-content/uploads/2010/06/Picture-31.png People's process of development can be witnessed through the evolve-ment of people's desire to improve their lives. Humans developed their settlement from living in caves, then build-ing shelters, and now home. Along this settlement evolution, they had also established certain norms, standards, and a mutual understanding surrounding their community. That is called the people's process of development.

3. district and commune levels' trainings and workshops will be conducted. These will help local people understand the impacts of climate change and the importance of forward planning. 'Mainstreaming climate change adaptation into the human settlement planning' will be implemented with locals. Also, the demand for support will be identified and a sectorial approach can be applied to it.

The integrated planning for resilience capacity will be based on the component1. UN-Habitat's P4CC[2] approach ensures that activities are feasible, effective and acceptable to communities, this ensures a solid framework for the participatory approach.

Component 2: Development of action plan and strategy for eco-human settlement, and integrating into planning and policy with participatory approach

In line with AF outcome 3 and 7 with national government priorities (See Section D) this component will focus on the development of the integrating human settlement and ecosystem into the planning. This will be done by:

- Comprehensive workshops for integrating the eco-human settlement strategies and plans (province, district and commune)
- Community action planning workshops to districts and communes for the development of climate resilient (integrated) community plans (Utilizing the tools and facilitators developed under 1.1)
- Policy framework development for integrating into planning

Component 2 will begin as the capacity building section of action planning under Component 1. The proposed intervention will be presented as part of the integrated planning for eco-human settlement strategy and action plan development. To ensure awareness and ownership over the project activities, stakeholders and targeted areas will participate in all steps (training, planning, implementation, monitoring, etc) of the project activities and trained to ensure a holistic and comprehensive integrated planning for green and blue networks.

The facilitation of local action planning coupled with bringing together local authorities and communities, will provide a comprehensive resilience framework. The prioritization of vulnerabilities related to the alignment of the ecosystem with human settlement focus of the project will also take place under this component. Furthermore, this component aims to promote the integration of the planning for eco-human settlement development strategy and climate change action plan. Blue networks will be examined mainstreamed into planning. Based on the data from the vulnerability and Risk assessment, 'Green and Blue networks' will be analysed and then discussed in the workshop at district and community levels.[3]

The capacity will be sustained through the development of guidelines in planning, construction and maintaining small-scale climate and disaster resilient infrastructure systems and through community agreements for executing component 3.

Component 3: Sustainability built through small-scale protective and basic service infrastructure

In line with AF outcome 4, 5 and 6 with national government priorities (See Section D) this component will increase resilience through a mix of soft and hard measures that will include year-

[2] P4CC's principles are to be strategic; meaning implementation should make the best use of the resources (financial, human and time) available, values-based; meaning that actions should be based on what matters most to com-munities, participatory; that the project should engage as many different stakeholders as possible throughout the project cycle, and integrated; meaning it should align with other plans and policies insofar as possible.

[3] More specifically; the role of the 'Green Network' is to protect green related ecosystems in order to protect them from the impact of flooding, land erosion, and sea-level rise. The 'Blue Network' is a part of planning for protecting water related impacts from climate change and natural hazards. These networks will be included in the planning for the integrated development strategies and climate change action plans. It will then result in the outcome of "mainstreaming climate change adaptation into the eco-human settlement planning".

round water supply, flood/coastal flood protection, sanitation, ecosystem-based adaptation options including mangrove planting and rehabilitation and commune-level law enforcement of the marine protected area.

The component aims at enhancing climate and disaster resilient infrastructure systems in human settlements. Due to the projected climate change impacts and disasters already occurring in coastal areas, ecosystem and human settlement can only be protected through physical intervention (with the support of the soft interventions above). Interventions will be selected by assessing their adaptive capacity, the impact of climate change, cost-effectiveness, risks and sustainability, this will result in protection of the coastal region against, flooding, sea level rise, drought, and salinity intrusion (i.e mangroves, or other protective infrastructure). As the result of the subsequent and integrated development plans, community action plans will be developed with 'Green and Blue networks', which will result in increased resilience of water, sanitation, mangrove and land erosion related infrastructure systems, these will be constructed in the most vulnerable/at risk settlements.

The project will be both innovative and efficient by using, where possible, the People's Process as a means to implement activities. The People's Process mobilises local people from the affected/target areas to take decisions regarding their resilience, to play an active role in the implementation of the measures and support them in implementing this process. Through this process communities/beneficiaries will have greater ownership of the process of building resilience, and will result in reduced implementation costs.

Component 4: Awareness Raising and Knowledge Management

In line with AF outcome 3 with national priorities (See Section D) this component will ensure that project implementation is fully transparent, that all stakeholders are informed of products and results and that they have access to these for replication. More-over, this component will also contain specific activities to further replicate and scale up the knowledge and awareness building component of this project. This will be done by:

- Lesson learned and best practices regarding resilient urban community development/housing are generated, captured and distributed to other communities, civil society, and policy-makers in government appropriate mechanisms;
- Advocacy platform built at the national level, with other stakeholders working on local level climate change adaptation work; and
- Regional advocacy and replication;

Lessons regarding increasing the resilience of communities against climate change impact need to be captured and municipal and district level government officials trained to ensure the sustainability of this project and effective replication of best practices. All knowledge products generated will be made available on a digital format in English and Vietnamese, and uploaded to web portal and spatial database.

B. Economic, Social, and Environmental Benefits:

By implementing a combination of soft and hard intervention, this project is expected to provide reductions in future climate related economic, household and livelihood losses, and reduction in vulnerabilities of women, indigenous people and youth and reduction in environmental degradation. Moreover, the project will bring numerous social benefits. Women and youth specifically will be involved in the planning, assessment and implementation of all components. In

the consultation process focus group interviews will be conducted with women and youth unions in order to encourage them to fully participate in the project.

Given that communities, and especially vulnerable groups, will be involved throughout the project, they will have the opportunity to directly influence project activities and outcomes, thus influencing their direct project benefits. The project activities will be adapted to local impacts of climate change and natural hazards such as sea level rise, flooding, drought and storms, but also to exposure to environmental degradation.

Table 10. Overview of Economic, Social and Environmental Benefits

Type of Benefit	Baseline	With/After Project
Economic	Climate change Is already leading to economic and livelihood losses, especially caused by sea level rise and floods, but also by droughts. Less capacity for livelihood strategy and resources in the communities No planning (action plan and strategy) for livelihood strategy and resources Locals face high damage and financial losses as a result The risks and vulnerability will be assessed under the project and baseline will be set after the capacity building and action on planning, and vulnerability and risk assessment before the proposed project interventions.	Reduction in economic and household losses due to increased resilience of institutions, communities and physical and natural assets, ecosystems and livelihoods and ecosystem. High economic costs of flooding caused by damage on infrastructure and assets can be mitigated; labour intensive works will bring temporary jobs for youths and women and reduce unemployment; flood risk reduction increases confidence of investors in the city; New climate resilience infrastructure and service contributes to economic benefits Community participation in infrastructure projects will benefit the community, livelihood strategy is also to primarily be sourced from the community. Additionally, resilient technologies will be imparted and may provide new livelihood opportunities.
Social	Poor quality housing and infrastructure in the target areas further drive vulnerability, and create additional challenges such as a lack of safety, while facilitating the spread of disease. Regular natural hazards can increasingly be considered as drivers of poverty and lead to financial losses, and compound social problems such as sanitation, food security, community safety issues The lack of (resilient) houses/ infrastructure, high poverty incidences and density in resettlement areas lead to relative safety issues, especially	Reduction in climate induced poverty, fatality rates, diseases and food security and safety issues due to increased resilience of institutions, communities and physical and natural assets, ecosystems and livelihoods. Health benefits can be leveraged (stagnant waters are breeding grounds for mosquitoes and water borne diseases); community involvement brings ownership of the intervention and a higher probability of sustainability; Capacity development directs involvement in adaptation actions, increases the resilience capacity of the most disadvantaged in the provinces. Safe and resilient infrastructure will increase security of women and other vulnerable groups and will reduce climate-impacted issues.

	for women, elderly, disabled people and youth Increasing inequality in the resettlement areas shows that the poorest are not sharing in the proceeds of the country's rapid economic growth	New climate resilience infrastructure and service contributes to social well-being. The project will use the vulnerability assessment and action planning process conducted in component 1 to ensure that actions target the poorest and most vulnerable, including women, youth and the elderly. Alignment with the commune/district in-vestment plans and increased capacity for officials at those levels to plan for and manage climate resilient investments will ensure that infrastructure and settlements are more resilient in the long term.
Environmental	Severe environmental degradation has taken place throughout the coastal area of Viet Nam Climate change is already leading to negative environmental impacts, especially differences in temperature and precipitation, leading to floods and droughts, which in turn leads to above factors and erosion, deforestation, etc Ecosystem degradation and poor waste management lead to reduction of livelihood options and health issues and flood risks due to insufficient waste disposal. The often-informal nature of the target settlements creates environmental problems, especially in waste management	Reduction in climate induced environmental degradation and losses, waste production because of environmental/ecosystem protection, community-based waste reduction and recycling schemes and energy efficient building construction techniques. Reduced human impact though changes to land plans and regulations/zoning, waste e.g. community-based waste reduction and recycling schemes and energy efficient building construction techniques. Promotion of ecosystem-based adaptation in the communities, leading to environmental benefits Reduction of soil erosion and land degradation. Proper waste management will have benefits on the environment through reduced flow of leachates, and reduced air, water and soil pollution in general.

C. Cost-Effectiveness of the Project:

The proposed project maximised cost effectiveness in a number of ways:

Cost effectiveness for the 'Hard' with 'Soft'

The design and implementation of the project focuses on maximizing the size of the hard/tangible component (64.5%) to directly benefit the most vulnerable populations. Where the project makes investments in soft activities, these will either a) directly support the hard investments (i.e training in installation or operation and maintenance), or b) invest in strengthening commune/district level planning – which will help to sustain and replicate the benefits of the project. Also, implementation

arrangement for operation and maintenance will be conducted at local level through Working Group and project team for sustainability. This means that the 'Soft' component to those activities is required to support the appropriate implementation of the 'hard' component to ensure sustainability of the project.

Cost effective investment

When the project undertakes action planning; cost effectiveness, adaptation-cost effectiveness, 'time to adaptation benefits' and 'no-regret' will all be factors in prioritising investments. This is standard practice according to UN-Habitat's well-established Planning for Climate Change methodology. This means that cost-effectiveness; adaptation effectiveness and development effectiveness are all part of the action planning process. UN-Habitat also has experience of conducting cost-benefit analysis of specific project options, where their immediate benefit is not clear[4]. The technical partner of KEITI will conduct feasibility study for environmental technology implementation, which is small-scale hard infrastructure intervention in Component 3. Thus, cost-benefit analysis will also be conducted with technical base. With feasibility study in full size project development phase, hard infrastructure implementation sites will be specified, and budgets (installation, operation and maintenance) will be estimated.

Table 11. Quantitative information for the each intervention

(Estimated)	Commune/ hamlet	Eco-friendly (Vegetation mat and mangrove planting) (ha)	Water desalination and purification (number)	Housing (Beneficiaries)	Physical infrastructure (Bridge) (Number)
Output		Output 3.1.2	Output 3.1.1	Output 3.1.3	Output 3.1.4
Bac Lieu	Huu Nghi	0	3	500	5
	14(including former settlement area)	10	3	500	10
Tra Vinh	Hoa Minh	110	5	1400	50
	Long Hoa	310 (200 Mangrove)	5	1280	50
Design			Desalination and purification system combined with ESP	Climate resilient design	
Budget		20%	65%	5%	10%

Cost effective operation through community contribution

UN-Habitat will implement the hard components of the project through the People's Process where possible. The project will be implemented in close partnership with communities and local government institutions. This implementation approach has been shown to reduce implementation costs by 20-30% over the life of the project by; using community labour instead of external contractors, procuring local materials where they are available.
All investments will be designed to be resilient. UN-Habitat will ensure that it does not select the cheapest options, but the most cost-effective. This means that if resilient infrastructure has a higher investment cost for a demonstrated longer lifespan and/or greater adaptation benefits it will be chosen over options with a lower initial cost.

[4] See for example for urban ecosystem-based adaptation options conducted in Fiji - http://www.fuku-oka.unhabitat.org/projects/voices/pacific_islands/detail07_en.html

The alternative implementation model to the People's Process is to use external contract-tors, which, as highlighted above, is more expensive and less likely to foster local owner-ship.

Table 12. Brief Cost Effectiveness Analysis of Proposed Adaptation Options

Proposed Action	Cost Effectiveness Criteria		Alternative Action	Cost Effectiveness Criteria	
Constructing new and restoring old water related system and infrastructure in highly drought and salinity intrusion locations (Blue Network)	Future cost of climate change	✓	Building sea walls for protecting salinity intrusion and sea level rise, and water system for rainwater	Future cost of climate change	✓
	Project efficiency	✓		Project efficiency	×
	Community involvement	✓		Community involvement	✓
	Cost/Feasibility	✓		Cost/Feasibility	×
	Environmental and social safeguarding risks	✓		Environmental and social safeguarding risks	More Risk
Providing basic service, especially water supply, to drought location. With waster harvesting, capture and storage and improved filtration (Blue Network)	Future cost of climate change	✓	Extending the water supply network (piped water) and construct wells for underground water	Future cost of climate change	×
	Project efficiency	✓		Project efficiency	×
	Community involvement	✓		Community involvement	✓
	Cost/Feasibility	✓		Cost/Feasibility	×
	Environmental and social safeguarding risks	Less Risk		Environmental and social safeguarding risks	More Risk
Improving coastal ecosystem for protecting land erosion and enhancing marine protected areas (Green Network)	Future cost of climate change	✓	Building sea wall and alternative livelihoods (i.e Shrimp cultivating)	Future cost of climate change	×
	Project efficiency	✓		Project efficiency	×
	Community involvement	✓		Community involvement	×
	Cost/Feasibility	✓		Cost/Feasibility	×
	Environmental and social safeguarding risks	Less Risk		Environmental and social safeguarding risks	More Risk
Expanding the green areas for protecting sea level rise and flooding (wetland) (Green Network)	Future cost of climate change	✓	Relocation / Building sea walls / alternative livelihoods	Future cost of climate change	×
	Project efficiency	✓		Project efficiency	×
	Community involvement	✓		Community involvement	×
	Cost/Feasibility	✓		Cost/Feasibility	×
	Environmental and social safeguarding risks	Less Risk		Environmental and social safeguarding risks	More Risk
Improving basic physical infrastructures (Bridge etc)	Future cost of climate change	✓	Resettlement	Future cost of climate change	×
	Project efficiency	✓		Project efficiency	×
	Community involvement	✓		Community involvement	×
	Cost/Feasibility	✓		Cost/Feasibility	×
	Environmental and social safeguarding risks	Less Risk		Environmental and social safeguarding risks	More Risk
Enhancing climate resilient housing	Future cost of climate change	✓	Resettlement /Alternative	Future cost of climate change	×

	Project efficiency	✓	livelihoods	Project efficiency	✓
	Community involvement	✓		Community involvement	×
	Cost/Feasibility	✓		Cost/Feasibility	×
	Environmental and social safeguarding risks	Less Risk		Environmental and social safeguarding risks	More Risk

D. Project Consistency with National or Sub-National Sustainable Development Strategies:

This project is consistent with national and sub-national development strategies of Vietnam on Socio Economic Development Plan, Climate Change Adaptation, and Sustainable Development.

The Socio-Economic Development Plan (SEDP) is the main plan for socio-economic development in Viet Namath action plan and strategy need to be integrated into SEDP to obtain the support of national and provincial government. This helps all levels of society in Viet Nam to participate in the planning of their province, district and commune. This is a driving factor in reform of local planning which can include climate-related action.

In the 2016 -2020 Socio Economic Development Plan, there are two development plans for dealing with environmental issues and it addresses the response to climate change. Along with international climate policy grounded in the UNFCCC, Vietnam has developed its own strategies through government policies and strategies to achieve the Sustainable and Climate Change Adaptation goals. ***Resolution 24/NQ/TW (2013) on Responding to Climate Change by Central Party Committee*** has taken on the role of the mainstream agency on policies for climate change adaptation

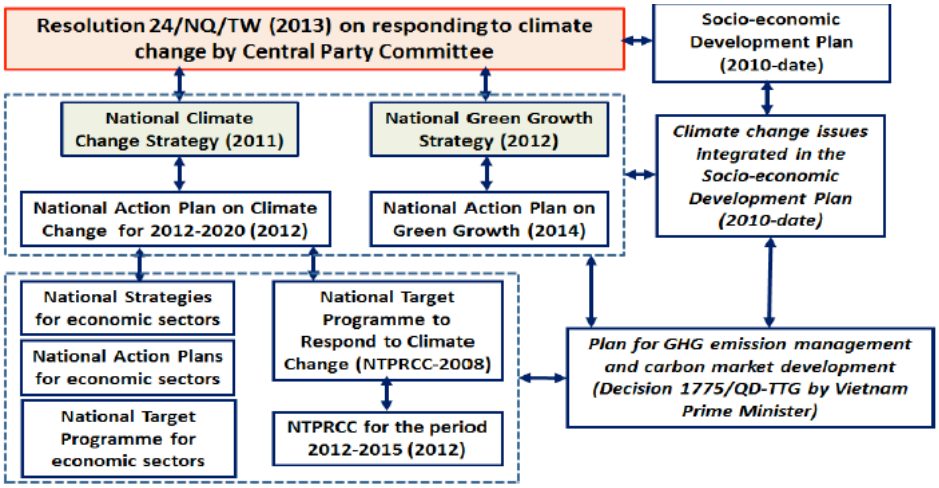


Figure 20. Evolution of Climate Change Policies in Vietnam

As shown in Figure 20, National Climate Change Strategy, National Green Growth Strategy are under ***Resolution 24/NQ/TW (2013) on Responding to Climate Change by Central Party Committee*** to support national policy in achieving the adaptation goal against climate change in Vietnam.

The National Climate Change Strategy (NCCS, 2011) states that Mekong Delta is one of the world's three most vulnerable deltas in the world (together with the Nile Delta in Egypt and the Ganges

Delta in Bangladesh) to rising sea levels. According to climate change scenarios, in late 21st century, Vietnam's yearly mean temperature will go up by 2-3 degrees, the total yearly and seasonal rainfall increases while the rainfall in dry seasons will decrease, while sea level is estimated to rise by 75 cm to 1 m compared to the 1980-1999 period. To cope with the challenges from climate change impact, Vietnam has been trying to:

- ❑ Improve public awareness and capacity of responding to climate change;
- ❑ Promote economic development in order to raise the country's economic competitiveness and national status on the international arena

Based on NCCS, the National Target Program to Respond to Climate Change (NTP-RCC) is the umbrella program and guiding framework for the Government of Vietnam's efforts in adaptation and mitigation of climate change risk. The Ministry of Natural Resources and Environment developed the program and is responsible for its implementation.

The Vietnam Green Growth Strategies (VGGS, 2012) as a mean to achieve a low carbon economy and to enrich natural capital, will become the principal direction in sustainable economic development; While GGS suggested overall strategies to achieve sustainable development goals, some of the components related to climate change.

In November 2017, the Government Resolution 120/NQ-CP on Sustainable and Climate-Resilient Development of the Mekong Delta of Vietnam was signed by PM Nguyen Xuan Phuc in a conference on sustainable development in the Mekong Delta. The principal solutions in Resolution 120 are well fit to the activities in the concept note.

Implementation of the Paris Agreement (PIPA) tries to be suitable to development circumstances of Vietnam and the level of international support received; Needs to follow direction from Parties, Government and inherit viewpoints, undertaking activities for climate change response and green growth which have been and are being implemented, and take advantage of opportunities presented by the Paris Agreement. Adaptation continues to be the main focus of the implementation of the Paris agreement in Vietnam

Table 13 shows how the proposed project aligns with policies, strategies and plans of Vietnamese government.

Accomplishing main four components above, the proposed project will support national development goal based on the assessment of national strategies of Vietnam and also provide additional support on the other components related to climate change adaptation.

Table 13. Project Alignment with Government Priorities

Measure	Resolution 24/NQ/TW (2013) on Responding to Climate Change by Central Party Committee	Green Growth Strategy (GGS)	National Climate Change Strategy (NCCS)	National Determined Contribution (NDC)	National Target Program to Climate Change (NTP)	National Action Plan on Climate Change in 2012-2020	Sustainable Development Strategy (SDS) for 2011-2020	Plan for Implementation of the Paris Agreement (PIPA)
❑ Institutional and community capacity building toward eco-human settlement development for supporting to enhance local climate response actions		Δ		✓	✓			✓
❑ Development of action plan and strategy for		✓	✓		✓	✓	✓	

eco-human settlement, and integrating into planning and policy with participatory approach								
❑ Sustainability built through small-scale protective and basic service infrastructure	✓	∆	✓	✓			∆	
❑ Awareness Raising and Knowledge Management	✓	∆	✓		✓			✓
✓: sufficient support ∆: need more support /: no support								

E. Compliance with Relevant National Technical Standards:

All project activities are in compliance with existing rules, regulations, standards and procedures endorsed by the government, as shown in the following table. In addition, compliance with tools are discussed below:

Table 14. Project Compliance

Expected Concrete Outputs / Intervention	Relevant rules, Regulations, Standards and Procedure	Compliance, Procedure and Authorizing Offices
1.1. Capacity building support provided to national government and local authorities to increase the resilience of human settlement against the impact of climate change	**Res. 120 2c:** Encourage participation of all relevant parties to ensure intra-regional connectivity and close connection between Southern region and Greater Mekong Sub-region/ **Res 120 3e:** Improve cultural and social levels equivalent to the national average level. Combine economic and social development, and protect the environment/**Res 120 6a:** MONRE shall take charge and cooperate with the National Committee on Climate Change and relevant authorities/**Ordinance 34/2007/PL-UBTVQH11,** Implementation of Democracy in Communes, Wards and Townships	National Commission on Climate Change (NCC), The Ministry of Natural Resources and Environment (MONRE), the Ministry of Agriculture and Rural Development (MARD), ministries and relevant local authorities, People's Committees (PPC), The Ministry of Construction (MOC) will be involved; Train government officials in eco-human settlement strategy and action plan. It will also encourage them to discuss and propose new strategic orientations and solutions with results and deadlines at the request of the Prime Minister or the Government;
1.1.1. Guidance and training materials development for vulnerability and risk assessment at local levels	**UN-Habitat Planning for Climate Change/ Res 120 3a**: The Mekong Delta development model must be human-centered, serve people and narrow the gap between the rich and the poor; in the context of climate change and the impact of extraction and use of water on the Mekong River upstream / **Circular No. 27/2015/TT-BTNMT MONRE** on strategic environmental assessment, environmental impact assessment and environmental protection plans.	Maximize use of existing VA tools/guidelines to minimize tool fatigue and to build on experiences in-country, where possible Ministry of Planning and Investment (MPI), NCC, MONRE, MARD ministries and relevant local authorities, PPC Develop the guidance and training materials in compliance with the policy, laws, guidelines and draft strategy;
1.1.2. Planning tools and training materials development for	**Decree No. 18/2015/ND-CP** of the Government concerns Environment protection planning,	MPI, NCC, MOC, MARD will be involved; Provide planning tools and training

planning approach, strategy and action plan development.	Strategic environmental assessments / **Circular No. 27/2015/TT-BTNMT** MONRE on strategic environmental assessment and protection plans / **Res 120 4d**: Formulate a master plan for sustainable and resilient development of the Mekong delta / **Res 120 5b**: Review, complete and prepare the planning for land use, use of water resources, environmental protection, extraction and sustainable use of bank natural resources of the Mekong Delta.	materials for a comprehensive and holistic climate change adaptation strategy according to the environmental protection law and in compliance with Government development planning approach.
1.1.3. National Induction Workshop / Project team (facilitators) training enabling facilitation of eco-human settlement strategy and action plan development	**Res 120 3d**: Coordinate investment activities in a uniform, inter-regional, inter-sectoral and targeted manner/ **Prime Ministers Decision No. 1393/QĐ-TTg** Establishment of Green Growth Strategy for Vietnam	Prime Minister, MPI, MOC, NCC, Ministry of Foreign Affairs (MOFA), PPC, MARD, MONRE will be involved; Engage government officials to share knowledge;
1.1.4. Training workshops, enabling national/provincial/district/commune to set up eco-human settlement strategy and action plan development for climate change adaptation	**Res 120 3d/Res 120 4d**: Continue to complete the mechanism for coordinating the development of the region and ecological sub-region the focus shall be given to smart management of Vietnam and the Mekong Delta/ **Prime Ministers Decision No. 1393/QĐ-TTg**	MOC, MONRE will be involved; Achieve this output is aligned to the Government's priority of boosting region's economy as well as strengthening climate change resilience;
2.1. Comprehensive workshops for integrating the eco-human settlement strategies and plans (National, province, district and commune)	**5a:** National Commission on Climate Change will propose some inter-sectoral and inter-regional policies and strategies, projects for sustainable development of the Mekong Delta /**Decree No: 16/2003/QH11** Construction Law. All Relevant procedures will be adhered to special consideration given to: Construction Planning. / **Resolution No. 51/2001/QH10**; **Law on Urban Planning**	MOC, NCC, MOFA, PPC, MARD, MONRE, Encourage cooperation among Mekong Delta with national and province authorities as well as the target communities;
2.1.1. Development of action plan and strategy for eco-human settlement at provincial/district/commune levels	**Res 120 2d/UN-Habitat Planning for Climate Change/ Res 120 5g**: - Review, amend and implement the planning for regional construction planning, urban and rural planning, rearrangement of population and relocation of houses along rivers, canals and ditches to minimize the risk of erosion. Keep houses safe from natural disasters/ **Decree No: 16/2003/QH11 Construction Law / Resolution No. 51/2001/QH10; Law on Urban Planning**	MOC, PPC, MPI, MONRE will be involved; Comply with all urban planning laws, while paying special attention to Article 8 while also aiming to develop local capacity through involvement in the planning process, allowing better local understanding of how to benefit from project implementation in the long term;

2.1.2 Integrating developed/revised action plan and strategy into planning and policy	**Res 120 2d/Res 120 3c:** Switch the development model according to the ecosystems to ensure suitability for natural conditions, people and natural laws/**Prime Ministers Decision No. 1393/QĐ-TTg** Establishment of Green Growth Strategy for Vietnam/ **Law on Water Resources (LWR) Order No. 15/2012/L-CTN** of July 2, 2012, on the promulgation of law	MARD, NCC, PPC, MONRE will be involved; Communities by holding workshops to improve community actions to climate change adaptation. MONRE will support these workshops.
2.1.3 Policy framework development for integrating locals' action plans and strategies for eco-human settlement into planning	**Res 120 4d** **Res 120 5g**	MARD, NCC, PPC, MONRE will be involved;
3.1 Vulnerable assets strengthened, new sustainable assets constructed (Sectorial approach): climate-resilient infrastructure: i.e. bridge, housing, and ecosystem	**Res 120 2d** **Res 120 3c**	NCC, PPC will be involved; Enhance community resilience capacity and knowledge
3.1.1. Small-scale water desalination and purification system built to provide clean and safe water for both living and agriculture (Water)	**Res 120 3b/Res 120 3c /Prime Ministers Decision No. 1393/QĐ-TTg** **Establishment of Green Growth Strategy for Vietnam / Decree No. 201/2013/ND-CP** Detail regulations for implementing some articles of the Water Resources Law	MOC, MARD, MPI, MONRE, MARD, PPC will be involved; Improve structure for water management in compliance with Government resolution of water as a core element;
3.1.2 Eco-friendly infrastructure to prevent land degradation/erosion (Eco-system based)	**Res 120 5g / Decree No: 16/2003/QH11 Construction Law / Decree No. 43/2014/ND-CP detailing the implementation of some articles of the Law on Land/ Law on Water Resources (LWR) Order No. 15/2012/L-CTN of July 2, 2012, on the promulgation of law**	MOC, MPI, MONRE, MARD Improve climate resilience infrastructure according to national policy and law on land, and in compliance with Government resolution of keeping houses safe from floods, droughts, storms and sea level rise; Respect all prohibited actions under LWR ;
3.1.3. Climate resilience housing upgrade (Housing)	**Resolution No. 51/2001/QH10; Law on Urban Planning. Article 13.7/** **Decree No: 16/2003/QH11 Construction Law.** **Section 4: Planning on Construction of Rural Population Quarters**	MOC, MPI, MONRE MOC, MONRE, MPI, MARD, PPC Improve climate resilience infrastructure according to national policy and law on land, and in compliance with Government resolution of keeping houses safe from floods, droughts, storms and sea level rise.
3.1.4. Climate resilient physical infrastructure (Bridge)	**Res 120 2c:** Respect natural laws and avoid violent interference with nature; select development models adaptive to natural conditions and	MONRE, Vietnam Environment Administration, Vietnam Administration on Sea and Island (VASI), MOC, MARD, MPI, DARD will be involved;

	friendly to the environment	Enhance ecosystem, giving priority to the protection of natural ecosystems; Follow the national regulations on environment protection and will respect all prohibited actions;
3.2 Capacity building workshops for management and operation of provided infrastructures	**Res 120 4d / Res 120 5g**	MARD, NCC, PPC, MONRE will be involved; Give capacity building workshop for the instruction and training for the operating the facilities to local; Consider Res 120 5g when implementing the planning for management;
3.2.1 Development of Working Group or governance for management and operation for provided infrastructures	**Res 120 4d / Res 120 5g**	MARD, NCC, PPC, MONRE will be involved; Organize working group for the management; Consider Res 120 5g when implementing the planning for management;
4.1.1. Lesson learned and best practices regarding resilient urban community development/housing are generated, captured and distributed to other communities, civil society, and policy-makers in government appropriate mechanisms	N/A	N/A
4.1.2. Regional advocacy and replication for developing the effective policy framework	N/A	N/A

F. Other Funding Sources:

Analysis took places of the listed projects and programmes in Mekong delta to avoid overlapped projects in the same region. The table below lists relevant projects, either recently completed, ongoing or about to start in the Mekong Region, that UN-Habitat can complement and synergise with the proposed project. They have been identified based on in-depth consultations with the national and local government and international agencies from targeted region and through desk research.

Despite the existence of the number of projects and programmes in Mekong Delta Region for climate change adaptation (e.g. by the World Bank, USAID, UNDP, SECO, GIZ and among others), from UN-Habitat's knowledge and based on a desk research as well as consultations with local governments and international agencies, none of the projects is focusing solely on enhancing the climate adaptation capacity in the commune level targeted by this project with bottom-up approach from the local level to the national level through both hard and soft intervention.

Most of the projects in Mekong Delta Regions have focused on community level capacity building or else policy and institutional level capacity building without providing the hard intervention while

the proposed project would like to focus on providing hard environmental-related infrastructure in small scale with suitable capacity building for the ownership of the community. However, several projects were identified for providing complimentary potential with this project. An analysis of lessons learned from these projects is as below (Table 15).

Table 15. Relevant Projects and their Complimentary Potential

Relevant Project/ Programme	Relevant Interventions and Lessons Learned	Complimentary and Duplication Potential
Bac Lieu Province		
UNDP/Expanding models of rice-shrimp cultivation for efficient management and sustainable use of alkaline lands in Bac Lieu (June 2015 - June 2018)	*Relevant Interventions:* Community awareness raising and capacity building to manage land as well as water resources; effective exploitation of saline-alkaline lands for rice cultivation; development and expansion of rice-shrimp farming model using MBD rice variety, all of which contribute to poverty reduction and new rural development of the region; *Lessons Learned:* It is important to provide the hard intervention with soft intervention for the awareness to maintain the hard intervention after the construction;	*Non-Duplication:* UNDP Project was in same targeted area but in different scale (provincial level) and also focused only on soft intervention *Complimentary:* Through component2 (integrated planning), the proposed project will make synergy by developing the integrated planning against climate change impact
The World Bank/Scaling-Up Urban Upgrading Project (Approval Date: 30 May 2017 Closing Date: 31 Dec 2023)	*Relevant Interventions:* Improving access to infrastructure in priority city areas and improve urban planning in the participating cities; *Lessons Learned:* The World Bank tried to give the training after the hard intervention for the ownership to the community for the facilities	*Non-Duplication:* Different targeted area/ The World Bank project targeted urban area in Mekong delta regions *Complimentary:* The proposed project will take this project as an example for the frame work to implement the soft intervention along with the hard intervention; Mekong Delta working group meeting is planned on March, 2019 for further discussion on possible collaboration
GIZ/Sustainable Development of Coastal Protected Forests (Wetlands) in Bac Lieu Province (Oct 2008 - Oct 2011)	*Relevant Interventions:* Activities to restore coastal forests have been supported, including the afforestation of 100 hectares of coastal strip incorporating biodiversity considerations; about five hectares were planted with rare endemic mangrove species; *Lessons Learned:* GIZ trained government officials and relevant institute for management	*Non-Duplication:* Different sector *Complimentary:* Through the consults UN-Habitat identified several areas for potential cooperation; GIZ also provided with the data in the region
USAID/Enhanced Capacity of the Vietnam Red Cross (2017-2019)	*Relevant Interventions:* Project activities includes developing hazard risk reduction and disaster preparedness palns *Lessons Learned:* USAID utilized a community-based approach to help communes better prepare for and increase their resilience against disaster	*Non-Duplication:* Different intervention, different sector *Complimentary:* The proposed project will use community base approach through components2 for developing the action plan
Tra Vinh Province		

ICCG/Strengthening capacity of Khmer women in adapting to climate changes in Tra Vinh province, Vietnam (20-Apr-2017 - 20-Dec-2017)	*Relevant Interventions:* The goal is to strengthen quality of human resources of Khmer women in the Tra Vinh province, to mitigate and adapt to climate change impacts. The outcome of this project will be increased adaptive capacity of community in the Tra Vinh province to climate change *Lessons Learned:* The outcome of this project will be increased adaptive capacity of community in the Tra Vinh province to climate change	*Non-Duplication:* ICCG project focused only on soft intervention through community level capacity building *Complimentary:* Through component2 (integrated planning), the proposed project will make synergy by developing the integrated planning against climate change impact
Netherlands Embassy (PPP)/Climate Change and Water Supply in the Mekong Delta, Vietnam (Apr-2013 – Mar-2017)	*Relevant Interventions:* This public private partnership (PPP) will improve drinking water supply by increasing availability and reducing climate change effects on three water companies in or adjacent to the Mekong Delta *Lessons Learned:* PPP approach could be the option for the up-scale the project in the future	*Non-Duplication:* Different sector *Complimentary:* Mekong Delta working group meeting is planned on March, 2019 for further discussion on possible collaboration;
IFAD/Rural Development: Project for Adaption to Climate Change in the Mekong Delta in Ben Tre and Tra Vinh Provinces (11- Dec- 2013 - 30-Mar-2020)	*Relevant Interventions:* The project proposes the development of a real-time salinity monitoring and forecasting system comprising of a network of 60 automated salinity monitoring stations, a network of up to 2000 CIG manual monitoring points *Lessons Learned:* IFAD could not cover the Tra Vinh Province by commune level, it only approach from top-down method for the DRR. So, it resulted that lack of participation from the community.	*Non-Duplication:* Different sector *Complimentary:* IFAD monitoring and forecasting system can collaborate with the water desalination and purification infrastructure from the proposed project; From the consult, UN-Habitat figured out IFAD is planning to start the new project from 2020 and both agencies agreed on future collaboration;
Mekong Delta Region		
USAID/Mekong ARCC Climate Change Impact and Adaptation Study for the Lower Mekong Basin (2011-2016)	*Relevant Interventions:* Improvements to canal networks including an emphasis on maintenance are required to cope with more intense flood events, particularly to ensure effective drainage of fields and waterways *Lessons Learned:* USAID highlighted ways of applying scientific findings at a community level that are helping to raise awareness	*Non-Duplication:* Different targeted area *Complimentary:* The proposed project will apply scientific findings through Feasibility Study to help raising awareness through component 4
USAID/Sustainable Infrastructure for the Mekong (SIM) (2016-2020)	*Relevant Interventions:* Sustainable Infrastructure for the Mekong will provide Lower Mekong partner governments with rapidly deployable technical assistance from the U.S. Government's premier scientists and engineers to mitigate potential negative social and environmental consequences from large infrastructure projects. *Lessons Learned:* USAID could include peer	*Non-Duplication:* Different targeted area *Complimentary:* The proposed project will include consults along with the training for policy makers through component2

	review consultations and technical training for decision makers, however it only provided with facilities	
USAID/Improving Water and Sanitation Services in Asia (2013-2015)	*Relevant Interventions:* The water links alliance seeks support from private sector and development partners to expand positive impact to urban water service *Lessons Learned:* USAID and Water Links will collaborate with development partners including international development agencies, civil society groups	*Non-Duplication:* Different targeted area *Complimentary:* The proposed project will also collaborate with international agencies for the scale-up project
IUCN/Building Resilience to Climate Change Impacts-Coastal Southeast Asia - Ben Tre (Jan-2011 - Dec-2014)	*Relevant Interventions:* community working groups developed through the BCR project had contributed to the improvement of natural-resource management and use. Workshop teams discussed alternative solutions and methods of community involvement, which IUCN will use as valuable feedback for its work in the future *Lessons Learned:* Bottom-up approach through community working group would be the key to achieve sustainable management	*Non-Duplication:* Different targeted area *Complimentary:* Through component 3, the proposed project will also have community working group to achieve sustainable management
Netherlands Embassy/The Mekong Delta Plan (2015-2025)	*Relevant Interventions:* The Delta Plan contains guidelines for government, donors and international financial institutions on moving from planning to implementation and placing investment projects in a long-term context. *Lessons Learned:* Delta Plan contains guidelines for government, donors and international agencies for climate change information on Mekong Delta	*Non-Duplication:* Different targeted area *Complimentary:* The Mekong delta plan can be the milestone for the proposed project; Mekong Delta working group meeting is planned on March, 2019 for further discussion on possible collaboration
GIZ/Integrated coastal and mangrove forest protection Mekong provinces to adapt to climate change (June 2011- July 2018)	*Relevant Interventions:* the scope of the interventions and the cooperation system are well defined and aimed at achieving the impact identified at the results level as well as by the programme objective indicators. *Lessons Learned:* The monitoring system developed by GIZ is excellent and can be used on our monitoring stage	*Non-Duplication:* Different targeted area *Complimentary:* The monitoring system can also be applied to the proposed project; Through the consults UN-Habitat identified several areas for potential cooperation; GIZ also provided with the data in the region
JICA/Ben Tre Water Management Project	*Relevant Interventions:* The project will provide saline water intrusion control facilities in Ben Tre Province in southern Vietnam, where saline water intrusion is damaging crops. *Lessons Learned:* JICA only provided the facilities in big-scale for the whole province, thus it was hard to cover the small communes for the drinking water	*Non-Duplication:* Different targeted area *Complimentary:* The facilities provided by JICA for saline water intrusion can collaborate with the small-scale water desalination and purification system; Through consults, JICA and UN-Habitat found the area that both agencies can

		make synergies in the future
Netherlands Embassy/Water Treatment Project (July - 2017 - Dec-2019)	*Relevant Interventions:* The project will deliver sanitation for residents and industries whose wastewater is currently discharged untreated, resulting in high levels of environmental pollution. *Lessons Learned:* The environmental benefits will be visible in a significantly improved water quality	*Non-Duplication:* Different targeted area *Complimentary:* Mekong Delta working group meeting is planned on March, 2019 for further discussion on possible collaboration

G. Capturing and Disseminating Lessons Learned:

A dedicated component (4) addresses awareness raising, knowledge management and communication. While this provides the cornerstone for capturing and disseminating lessons learned, other project components directly contribute to knowledge management mechanisms and dissemination of lessons learned from local to national and to international levels.

At the local level, a participatory approach involving communities, local authorities and will lead to increased local knowledge on planning, constructing and maintaining resilient infrastructure. Project demonstration sites will contribute to sharing lessons and training through local disseminators and tools and guidelines, this will take place from the beginning of the project and throughout its implementation. The project will also use a participatory monitoring process, which will enable the beneficiary communities under component 4.

At the national level, this project will allow other vulnerable regions in Vietnam to draw on this framework and lessons learned through replication and scale-up of good practice. Information obtained through this project will be consolidated in reports, then tools and guidelines will be developed for resilient and sustainable urban communities for developing and upgrading human settlement. The partnering departments of the various ministries at the regional level will directly link with the ministries at the national level to facilitate national wide dissemination.

As part of the sustainability/exit strategy, the project will develop participatory monitoring processes, which will trigger institutional learning processes, participation from local groups, knowledge exchange and replication and scale-up of good practices.

At the international level, projects related to climate change, especially for eco-human settlement, and resilient housing and community level infrastructure may benefit from the proposed project. UN-Habitat is plugged into a number of international mechanisms. The Knowledge Centre on Cities and Climate Change (K4C) provides a knowledge management platform for Climate Change Adaptation and Human Settlement Interventions. It is proposed to use this platform, accessible at UN-Habitats website, to disseminate the lessons learned from this project. UN-habitat has also been working on integrating knowledge generated from the project with the knowledge management component of CCCA programme, and through the 'camclimate' website[5]

Table 16. Project Outputs and Related Learning Objectives, Indicators and Products

Expected Concrete Outputs / Intervention	Learning Objectives (LO) And Indicators (I)	Knowledge Products
1.1. Capacity building	(LO): Improved Climate Change awareness and	*Training materials,*

[5] http://www.camclimate.org.kh

support provided to national government and local authorities to increase the resilience of eco-human settlement against the impact of climate change	knowledge of mainstreaming climate change adaptation into the planning of government officials at all levels (National, province, district and commune), specific focus on District and commune levels (I) Guidance and materials for trainings Number of training workshop and participants	*guidelines comprising of planning approach, resilient infrastructure, and technical standards, environmental and social safeguards and community action planning*
1.1.1. Guidance and training materials development for vulnerability and risk assessment at local levels	(LO) Develop the guidance and training materials for mainstreaming climate change adaptation into the planning (I) Number of guidance and training materials Quality of participants on the development of materials Pilot workshop with practitioners	*Training materials, guidelines comprising of planning approach, resilient infrastructure, and technical standards, environmental and social safeguards and community action planning* *Pilot training workshop with practitioners*
1.1.2. Planning tools and training materials development for planning approach, strategy and action plan development	(LO) See 1.1.1 and guidance and training materials will be included planning approach, strategy, and action plan for comprehensive and holistic climate change adaptation (I) Number of guidance and training materials Quality of participants on the development of materials Pilot workshop with practitioners	*Training materials, guidelines comprising of planning approach, resilient infrastructure, and technical standards, environmental and social safeguards and community action planning*
1.1.3. National Induction Workshop / Project team (facilitators) training enabling facilitation of eco-human settlement strategy and action plan development	(LO): Improved Climate Change Adaptation tool and planning approach (I): Training guidance materials Number of plans (LO): Improved awareness and local vulnerability and strategies sharing (I): Number of participating government officials, Number of strategies shared Number of local plans reflecting climate change adaptation/resilience	*Planning tool for community vulnerability* *Training materials* *Guidance for training* *Workshop report and documentation (Concept note, Agenda and List of Participants)*
1.1.4. Training workshops, enabling national/provincial/district/commune to set up eco-human settlement strategy and action plan development for climate change adaptation	(LO): Improved Climate Change awareness and enhanced knowledge of government officials at all levels and trainers for development of action plan and strategy (I): Number of participating national and local government officials Number of trainers Project tools for planning approach and guidance Number of workshops	*Training report and training materials* *Eco-human settlement strategy and action plans* *Guidelines comprising of assessment and planning approach, resilient infrastructure, and technical standards, environmental and social safeguards and community action planning*
2.1. Comprehensive workshops for integrating the eco-human settlement strategies and action plans into planning	(LO): Improve the local's knowledge and awareness of climate change adaptation and planning (I): Number of workshops Number of local plans reflecting climate change adaptation / resilience	*Workshop and feedback reports* *Revised action plan and strategy for climate change adaptation* *Revised community*

(National, province, district and commune)		*planning for climate change adaptation*
2.1.1. Development of action plan and strategy for eco-human settlement at provincial/district/commune levels	(LO): Improve local action for climate change adaptation and planning Integrate climate change action plan and strategy into community planning (I): Number of local action workshop Number of local plans reflecting climate change adaptation / resilience (LO) Develop community based eco-human settlement planning and strategy Revise the climate change adaptation action plan through the workshop (I) Number of action plan work shop Number of eco-human settlement strategies and action plans	*Revised action plan and strategy for climate change adaptation* *Revised community planning for climate change adaptation* *Community based eco-human settlement strategy and planning* *Revised action plan and strategies for climate change adaptation*
2.1.2. Integrating developed/revised action plan and strategy into planning and policy	(LO) Integrated planning with eco-human settlement action plan and strategy for climate change adaptation (I) Number of integrated planning Number of workshop and meeting at local levels	*Integrated planning with eco-human settlement action plan and strategy for climate change adaptation* *Provincial SEDP that included climate change action plan and strategy from local levels*
2.1.3 Policy framework development for integrating locals' action plans and strategies for eco-human settlement into planning	(LO): Develop the policy framework for integrating of planning Revise policy framework for integrating Develop policy for climate change adaptation with the action plan and strategy at local levels (I): Number of dialogue event Number of meeting with local government Guidance for revising policy framework Number of integrated planning with eco-human settlement for climate change adaptation	*Guidance for revising policy framework* *Revised policy framework for integrating action plan and strategy into planning* *Integrated planning with eco-human settlement for climate change adaptation*
3.1. Vulnerable assets strengthened, new sustainable assets constructed (Sectorial approach): climate-resilient infrastructure: i.e. bridge, housing, and ecosystem	(LO): Improved knowledge and awareness of climate resilient infrastructure Enhanced local ownership for hard infrastructures Encourage locals to join the project of climate change adaptation and action plans (I): Number of workshops for understanding about hard infrastructure intervention Number of training workshop for maintenance and operation	*Local operation and management framework and manuals* *Guidance for maintenance and operation*
3.1.1. Small-scale of water desalination system to provide clean and safe water for both living and agriculture (Water)	(LO) Improve the physical infrastructure for water management (I) Number of hard infrastructures in communities Number of training workshop for maintenance and operation	*Design and technology for water management system* *Implementation plan and report*
3.1.2. Eco-friendly infrastructure to prevent land degradation/erosion	(LO) Improve the physical and climate resilient infrastructure (I) Number of hard infrastructures in communities Number of training workshop for maintenance	*Design and technology for climate resilience infrastructures* *Implementation plan and*

(Eco-system based)	and operation	*report*
3.1.3. Climate resilience housing upgrade (Housing)	(LO)Improve the physical condition for house and implement climate resilient housing design (I) Number of improved houses Number houses with climate resilient design Number of training workshop for maintenance and operation	*Design and technology for climate resilience housing* *Implementation plan and report*
3.1.4. Climate resilient physical infrastructure (Bridge)	(LO) Improved infrastructure against the impact of climate change and natural hazards (I) Number of eco-friendly technologies implemented Number of training workshop for maintenance and operation	*Design and technology for climate resilience infrastructure* *Implementation plan and report*
3.2. Capacity building workshops for management and operation of provided infrastructure	(LO) Improve locals' capacity of operation and maintenance (I) Number of manuals and video clips for operation and maintenance Number of training workshop Number of meeting with working group and appointed agencies	*Workshop feedback report* *Manual and video clips for operation and maintenance* *Governance for operation and maintenance* *Monitoring plans*
3.2.1. Development of working group or governance for management and operation for provided infrastructures	(LO) Enhance implementation arrangement and governance Develop monitoring plans and communication channels for operation and maintenance (I) Number of meeting with working group Number of meeting with appointed governmental agencies for operation and maintenance	*Meeting minutes and feedback reports* *Design of implementation arrangement and governance* *Monitoring and communication plans and structure*
4.1.1. Lesson learned and best practices regarding resilient urban community development/housing are generated, captured and distributed to other communities, civil society, and policy-makers in government appropriate mechanisms	(LO): Sharing of lessons learned and best practices (I): Number of platforms used for sharing Number of workshops for sharing experience and best practices	*Dissemination through regional organizations and websites* *Sharing experience and best practice materials* *Workshop and feedback report0*
4.1.2. Regional advocacy and replication for developing the effective policy framework	(LO): Scaling up the good practices to the policy level and other funds (I) Number of knowledge sharing workshop at local level Number of further investment and cooperation meeting	*Reports of dialogue and knowledge sharing workshop* *Meeting minutes and partnership documents for further investments*

H. The Consultation Process:

The idea of the project has been started from the field mission to the coastal region of the Mekong Delta between 10 and 14 September 2018. In the field mission, the impact of climate change was specifically identified at provincial and district level. In the meetings with provincial level government officials, general and current status of the impact of climate change was discussed, and

economic, social and environmental related issues were also considered. For more detailed information and analysis, data collection was requested to relevant government agencies.

The first meeting with focal point, which is the Ministry of Natural Resources and Environment, focused on showing the interest of the project development and find out the demand of Vietnams government and national priorities for climate change adaptation.

The additional meetings at the national level focused primarily on alignment with national priorities (as identified in Section D), coordination (and avoiding duplication) with other development partner initiatives (outlined in Section F), the thematic and geographic focus, and the pre-identified target communities.

National level consultation meeting was held in 7 November with various stakeholders and experts. Community level consultation was held in December with rapid vulnerability and risk assessment. In the community consultations women, indigenous people, elderly, youth and people with disability have been part of the consultation process.

In November, project related agencies were contacted and consultation meetings were held. The consultation focused on synergizing with other projects, avoiding overlaps and identifying lessons learned from other projects. In Vietnam, there is the Mekong Delta Working Group that facilitates discussion about projects and policy.

In December, community consultation took place. The objective was to understand the local climate change impact/effects per community, individual communities' adaptive capacity, the demand for resilience capacity building and barriers to building resilience, specific resilience building needs and interests and concerns regarding the propose project in general.

Table 17. Stakeholder Consultation Meeting Held

Agency	Consultation objective	Outcome	Conclusion
MONRE	Show the interest of AF project development and implementation / RE-confirm focal point willingness/ Establish preferred target areas/Ensure coordination with other ongoing adaptation activities and policy alignment	MONRE coordinated for consultation meeting and supports UN-Habitat for administration MONRE will support UN-Habitat to organize the consultation workshop at local level MONRE also supports to find the most vulnerable communities for the AF project development	Set up the consultation meeting on 7 November 2018 Sharing the experience that MONRE support UNEP's AF project development UN-Habitat receives the full support of MONRE for project development
MONRE	To collect the feedback of the project from governmental officials and experts To discuss about the potential project sites for the project To find the gap between existing and UN-Habitat projects	Various departments in MONRE and experts participated in the consultation meeting Sharing the experience and knowledge about the current local situation Reviewed the developing project and its draft of the concept note	Narrow down for the project locations: Bac Lieu and/or Ben Tre Potential project site: An Giang, Ca Mau. The project site will be decided by 16 November Components and activities in the draft will be revised Collected the data about ongoing and planned projects in the Mekong Delta

			Collected data for identifying the gap between existing and UN-Habitat projects
Province officials in three provinces	Agree target sites/Understanding climate change vulnerability, integrating climate change action into urban planning/highlight possible adaptation investments	Data collection, possible project sites were introduced and visited, understanding of current status of the impact of climate change, provincial priorities for climate change adaptation, the level of awareness of climate change	Getting the feedback from the locals about the project and identifying the needs of locals Providing socio-economic and environmental data for districts and communes Discussing about implementation
Commune officials in three provinces	Agree target sites/Understanding climate change vulnerability, integrating climate change action into urban planning/highlight possible adaptation investments/understanding community coping mechanisms/Barriers to building resilience	Data collection, possible project sites were introduced and visited, understanding of current status of the impact of climate change, district and commune levels priorities for climate change adaptation, the level of awareness of climate change	Locals understood about the project and benefits from the implementation Identifying the real needs from locals and obtaining the feedback about the projects Also recognizing the challenges what locals face because of the impact of climate change Also checking the knowledge about the impact of climate change and climate change adaptation
GIZ	Ensure synchronicity with the GIZ integrated Coastal Management Project in the Mekong Delta	For site selection process, GIZ supports their new information system from ICMP Their ICMP did not be implemented in Ban Tre and Tra Vinh, thus AF project can fill the gap. Small-scale infrastructure will be added as pilot project, which could be the common area between to agencies. GIZ could provide concrete evidence and data in MD when UN-Habitat develop its concept note for Adaptation Fund.	Project site could be overlapped, but we should focus on how we make the synergy within the same project site through proper cooperation GIZ suggested also focus on river erosion since the informal settlement along the river accelerate the river bank erosion; the resettlement of the informal sector along the river is urgent issue for the government
JICA	Ensure synchronicity with the JICA Ben Tre Water Management Project and share the data from JICA's Feasibility study, vulnerability assessment, and climate change projection	Identified the gap between JICA's and UN-Habitat's AF project in terms of geography and context: JICA project mainly focuses on hard infrastructure, and not including planning component. JICA's project is big scale infrastructure construction project, thus they cannot cover all the region. Thus, they only can cover the around of Ben Tre City and upper area of the province.	JICA is focusing on overall Ben Tre in province level while UN-Habitat is constructing small-scale infrastructure in commune level; combination of diverse level could make synergy for both project Ben Tre Water Management Project only covers upper part of Ben Tre; TP. BEN TRE; the project cannot

		Data collection	cover overall Ben Tre province so UN-Habitat might be able to fill the gap also geographically in the same province JICA and UN-Habitat could also work together on developing master plan for Ben Tre since planning is not included in Ben Tre Water Management Project
SECO	Gain experience from SECO on the implementing modality for multi-lateral climate finance projects Synergize with other projects, avoiding overlaps and identify lessons learned	Have suitable institutional arrangement for implementation of the project is the key; To succeed on developing the project in MDR, reflection of the local needs is important; Identifying local's demand and vulnerability and risk assessment are the key aspects for small-scale infrastructure intervention project;	SECO suggested the projects relevant to the proposed project: WB project in urban climate resilient project in Can Tho could be good reference for developing the small-scale infrastructure; GIZ project in Anh Giang, Kien Giang, and Cau Mau on sustainable drainage system link to green infrastructure
NISTPASS	Gain knowledge and practices for environmental technology application at local level	Data collection Possible project sites were introduced and potential environment related technology would be introduced with understanding of current status of the impact of climate change, district and commune levels Priorities for climate change adaptation, the level of awareness of climate change	Will clarity of how to transform outputs to outcomes is essential to ensure a real change Will have a dialogue events for integration needs to be apply at local level
ISPONRE	To find the gap in the Vietnamese context and seek advice for project site selection	Notes that there is also a need to proof more resilience for activities. Adds that the component of knowledge sharing the model should be scalable for the implementation. With the ecosystem approach it is necessary to ensure the house supply chain in the market of flooding rice	Will revise the planned activities Considering about ecosystem approach with agricultural base
IFAD	Review AMD Project and Adaptation Fund Project, and discuss possible synergy.	Notes the agencies challenges, such as the lack of details. Offers to share useful of IFAD reports for the project implementation. Notes the need of communication with PPC for further details.	The gaps perceived in Ben Tre and Tra Vinh are being filled by IFAD. Will contact IFAD for details of PPC.

I. Justification of Funding Request:

The proposed project components, outcomes and outputs fully align with national and local government/institutional priorities/ identified gaps and with the needs of the target communities and vulnerable groups as identified through project analysis. It will also align with the Adaptation Fund's seven 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 Vietnam's climate change response. UN-Habitat is well placed to execute the proposed project based in its human settlements related climate change work in the Asia-Pacific Region and its strong presence in Vietnam; it has a history of strong partnerships with national and sub-national government agencies, a wide range of other stakeholders and most importantly communities with vulnerabilities.

The project strongly addresses the climate resilience of the most vulnerable communities in the coastal region of the Mekong Delta in Vietnam where numerous underlying vulnerabilities predispose communities to climate vulnerability. The project aims to maximizing the funding amount for the local investment component (component 3); funding allocation of the 'soft' components is required for complementarity/support for Component 3 in order to achieve sustainability and quality assurance of the project.

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

Project Objectives	Baseline (without AF)	Additional (with AF)	Comment / Alternative Adaptation Scenario
Institutional and community capacity building toward eco-human settlement development for supporting to enhance local climate response actions	There are no detailed plans for human settlement and ecosystem. No awareness of the linkage between human settlement and ecosystem. No support plans for local climate response actions in terms of human settlement and ecosystem.	There will be detailed plans for human settlement and ecosystem. Public can understand about the correlation between human settlement and ecosystem. Develop the plans for local climate actions in terms of human settlement and ecosystem	Local people will adapt to the impact of climate change and they could transform by themselves. However, it would not be the well-structured adaptation and will be not efficient and effective. Without the intervention, the enhancement of adaptive capacity will be limited in terms of eco-human settlement planning
Development of action plan and strategy for eco-human settlement, and integrating into planning and policy with participatory approach	Detailed plans for human settlement and ecosystem would not be integrated into the provincial, district and commune level plans. Lack of integration of climate action plans and strategies. Community level demand will not be reflected into the plans	Identifying the demand from community level. This demand can be developed to local climate response actions. This action plans will be integrated into the socio-economic development plans. Green and Blue network can be set up and support to local to strengthen climate resilience.	Planning will be developed, but it would not be the comprehensive one. No holistic approach will be implemented for responding the climate change. Without the intervention, the opportunity that planning for responding the climate change at local level into provincial and national level planning will be limited, and the

			actual challenges and financing mechanism for climate change related projects will not be captured
Sustainability built through small-scale protective and basic service infrastructure	National government and local authorities will not be able to respond to climate change impacts because local development plans do not include specific action plans and there is insufficient financial capacity to invest climate resilient infrastructures	Locals can have physical infrastructure to prevent from the impact of climate change. Locals can understand exact challenges from the impact of climate change and they can utilize the infrastructures for strengthening climate resilience. Locals will be able to have basic service for water management and waste treatment.	Without undertaking actions through the People's Process, adaptation actions would not be participatory or generate the levels of local ownership achieved by this project.
Awareness Raising and Knowledge Management	Local levels (district and communes) have limited knowledge of resilient planning and protection of human settlement Less coordination of vertical governance and knowledge management	Locals have capacity building for knowledge management. Well-structured and coordinated governance ensures that local participation enhances climate resilience. Local government is aware of climate change and its impact. Knowledge will increase and the likelihood of follow up finance for additional investment will be increased	Without these interventions, the chances of wider knowledge generation and follow-up financing would be severely limited.

J. Sustainability of the Project:

The project aims to sustain adaptation benefits achieved and replicate best practices (i.e. lessons) after the end of the project through a combination of anchoring activities into existing government programmes and strategies and community plans, including for infrastructure operation and maintenance and by sharing lessons and best practices

Institutional Sustainability

The project will pave the way for the national government and local authorities in Vietnam to sustain and up-scale the project to vulnerable settlements in other regions, by utilising the planning tool equipped through the proposed project and sharing lessons learned from the project. Trained government officials at different levels will guide the process in combination with technical and financial support from the government. At the same time, the project will also strengthen the strategies and plans to cope with Climate Change Adaptation in Vietnam.

Moreover, for infrastructure operation and maintenance, working group will be organized along with project office at provincial level. The working group and project team will develop the strategy for infrastructure operation and maintenance with technical teams. During full-size project development, implementation arrangement will be conducted and the working group will consider about how to develop sustainable environment of hard infrastructure investment.

Also Project Steering Committee will develop monitoring plans for infrastructure operation and maintenance.

Social Sustainability

By implementing the project through the People's Process methodology, whereby people take ownership for the design and construction of the infrastructure that they will ultimately be beneficiaries of, there will be greater social sustainability as people will take ownership of their adaptation infrastructure. In implementing the project, communities will gain greater awareness of climate change and adaptation, and vocational skills to build and maintain infrastructure.

Economic Sustainability

Adaptation is a highly important economic activity in the targeted areas. In most of the targeted settlements, people rely on tanker-supplied or bottled water, which is expensive. This project will enable people to access water in a sustainable manner at much lower cost. This frees-up household income for other purposes.

Environmental Sustainability

The project will make use of local materials, where possible. The project will be implemented in the Mekong Delta and as such, activities undertaken in this area will make special consideration of the delicate environment. The part of the project is also implemented in the coast; a sensitive environmental location. The rest of the project is also implemented in coastal areas; a sensitive environmental location. The project will also make provisions for the protection of the environment through its safeguarding procedures. As shown in Section K, below, the project will ensure the protection of natural habitats, conservation of biological diversity, prevention of emissions that cause climate change, and prevent pollution and promote resource efficiency

Financial Sustainability

Financial sustainability is most relevant to the ongoing operation of the hard component of the project. This sustainability is associated with technical and institutional sustainability. Thus technical sustainability will be considered with financial one.

Technical sustainability

Technology in hard infrastructure will be designed and constructed using resilience and building back better principles. This will enhance the durability/sustainability significantly. With the principle, feasibility study for hard infrastructures in water, eco-friendly infrastructures and housing will be conducted with experts from KEITI in full size project proposal development phase.

Table 19. Technical sustainability

Expected concrete output/Intervention	Sustainability (Operation/maintenance)
3.1.1 Small-scale water desalination and purification system built to provide clean and safe water for both living and agriculture (Water)	Working Group at local level will appoint one agency under local government for maintenance. This agency will have formal partnership with the investor for operation and capacity building for maintenance.
3.1.2 Climate resilience infrastructure building and refurbishing (eco-system based)	Mixed activities will be operated: Mangrove planting and vegetation mat Technical team will have partnership with appointed agency for operation and maintenance.
3.1.3 Climate resilience housing upgrade (Housing)	UN-Habitat has long and substantive experience on housing upgrade for climate change resilience. UN-Habitat Viet Nam office will partnership with Working Group and appointed agency for operation and maintenance.

With concrete implementation arrangement with local government and project steering committee, project management unit at national level and project offices at local level will support the hard infrastructure investment with technical institutes. Also participatory approach will be implemented into operation and maintenance through capacity building.

K. Environmental and Social Risk and Impacts:

The proposed project seeks to fully align with the Adaptation Fund's Environmental and Social Policy (ESP). Outlined below is a summary of the findings of the preliminary screening and assessment process that has been carried out to evaluate the environmental and social impacts and risks of the entire project. There is also a categorization of the project and a completed risks and impacts checklist.

UN-Habitat conducted a preliminary project screening of environmental and social risks ac-cording to the 15 principles outlined in the AF's Environmental and Social Policy based on analyzing information available at the project design stage. The potential risks identified and preventive or mitigation measures planned are presented below (Table 20).

The project has been and will be further designed to generate positive economic, social and environmental impacts. It will achieve this by using inputs from local authorities and by incorporating best practices from other projects, while also placing specific priority on inputs from women and marginalized and vulnerable groups in target communities. The adaptation measures proposed in the full proposal will be selected together by the communities and local authorities, making sure they are culturally and locally appropriate

Table 20. Overview of the Environmental and Social Impacts and Risk Identified

Checklist of environmental and social principles	No further assessment required for compliance	Potential impacts and risks – further assessment and 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 Labor 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 shown in Table 21 the project seeks full alignment with Adaptation Fund's Environmental and Social Policy (ESP) and will also be screened according to UN-Habitat's new Environmental and Social Safeguards policy. This section briefly describes the initial analysis of environmental and social impacts of the project based on the ESP.

Activities under Component 1, 2 and 4 have been categorized as low risk (Category C). De-spite this, steps will be taken to ensure that no environmental or social impacts can occur. This includes the use of quota systems for involving women and marginalized and vulnerable groups in the planning processes and ensuring transparency of the execution of all activities, such as posting attendance lists and outcomes of meetings and trainings.

The activities under Component 3 are currently being regarded as unidentified sub-projects, and as such, some activities have the potential, without an environmental and social safeguarding system, including mitigation measures, to create negative environmental and social impacts.

As such, the activities under component 3 are to fit into medium risk (Category B) or low risk (Category C). This is due to the scope of the proposed numerous interventions; they are characterised by their small scale and very localized nature, they will be proposed and co-managed by communities where possible, who have a stake in avoiding environmental and social impacts.

In Component 3, small-scale water desalination system built to provide clean and safe water for both living and agriculture (Water), climate resilience infrastructure building and refurbishing (Infrastructure), climate resilience housing upgrade (Housing), enhancing ecosystem (Ecosystem), will be considered for hard infrastructure intervention, and these aspects are currently being explored through community and stakeholder engagement, and for social and environmental risk impact, further safeguard analysis will be implemented with feasibility studies. This means that the potential for direct impacts is small and localized, that there can be few indirect impacts, and that transboundary impacts are highly unlikely. Given this, cumulative impacts are also unlikely. Because of the nature of activities under components 3 the entire project is regarded as a medium risk (Category B) project.

Table 21. Possible risks and mitigation measures

AF environmental and social principles	Possible Risks	Possible Mitigation Measures
Compliance with the Law	Possible conflicts over land ownership Failure to comply with laws relating to procurement procedures	Only citing infrastructure on public land. Engagement with Department of Natural Resources and Environmental for land use and Department of Construction for approval Integrating legal compliance into all training
Access and Equity	That certain groups are denied access to infrastructure, or that preferential access is given to others	Community management with rules ensuring that equal access is guaranteed
Marginalized and Vulnerable Groups	There would be small number of vulnerable groups to access to livelihood resources	Community management with rules ensuring that equal access is guaranteed
Human Rights	Human rights breaches can arise from denying access to water and other basic services, or from land conflicts, for example	at project proposal stage, and in line with UN-Habitat's Project Management Cycle and Work Flow policy, the project will further be screened for its adherence to three cross-cutting issues which are: gender, human rights and climate change. The Human Rights Officer of UN-Habitat will ensure that the project is designed to respect and adhere to the requirements of all relevant conventions on human rights.

Gender Equity and Women's Empowerment	Women could be denied access to infrastructure, or excluded from making critical decisions	The project design will ensure that gender considerations are included in all project interventions, with a specific focus on capacity building on the all levels as well as activities on the ground. During the development of the full project proposal, the Gender Officer of UN-Habitat will be consulted to ensure that the project follows best-practice guidelines.
Core Labor Rights	Labour rights may not be respected when contracting communities	All community contracts must be scrutinized to ensure they comply with both Vietnamese law and international standards. The activities under Component 3 will create employment enabling some marginalized and vulnerable groups including unemployed youth and women to access employment. The relevant national labour laws guided by the ILO labour standards will be followed throughout project implementation.
Indigenous Peoples	The certain minority group can be denied to access to infrastructures and excluded from the process of decision making	Community management with rules ensuring that equal access is guaranteed and participating in the process of decision making
Involuntary Resettlement	Possible eviction arising from conflicts over land ownership	Tenure security is part of UN-Habitat's core mandate. In the event that resettlement is necessary to protect life in case of an urban area in high risk, the due process as laid out in national and international laws will be followed. UN-Habitat has a long experience in participatory planning in high risk area avoiding systematically involuntary resettlement
Protection of Natural Habitats *Conservation of Biological Diversity*	While damage to natural habitats and threats to biological diversity are unlikely, there is a possibility that construction work undertaken or reforestation measures may adversely impact on local biodiversity	Environmental Impact Assessment will be conducted and the damage will also be investigated at full project stage.
Climate Change	N/A	This project is inherently an adaptation project and as such no maladaptation is foreseen. The project will not provide or install infrastructure or appliances that result in increased emissions
Pollution Prevention and Resource Efficiency	Construction of infrastructure generates waste	Incorporating waste management and disposal into design.
Public Health	N/A	No public health issues are foreseen, and improving public health is a secondary impact area of this project.
Physical and Cultural Heritage	N/A	No physical or cultural heritage impacts are foreseen; however, this will have to be reviewed when the activities are being developed in more detail at full proposal stage.
Lands and Soil	The physical demarcation of	Soil conservation will be enhanced through

Conservation	areas at risk for limiting urban development will seek to protect risk areas and critical natural habitats from urban development	afforestation components as protective measures for land erosion control.

The environmental and social impact assessment will consider all activities proposed by the project, event those that, at this stage, are considered 'soft' activities and have been placed in risk level Category B or C. At this stage, the activities listed in bullet points below have been clustered together, as similar types and levels of environmental and social impacts (and thus safeguarding measures) are foreseen. However, these will be revisited during the full proposal development stage, when activities are detailed out further and when further information will be provided about the nature and extent of the environmental and social impact assessment that will be undertaken.

PART III: IMPLEMENTATION ARRANGEMENTS

This following section will be completed at a later stage of the project

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

A. Record of endorsement on behalf of the government[6] *Provide the name and position of the government official and indicate date of endorsement. If this is a regional project/programme, list the endorsing officials all the participating countries. The endorsement letter(s) should be attached as an annex to the project/programme proposal. Please attach the endorsement letter(s) with this template; add as many participating governments if a regional project/programme:*

H.E Dr. Tran Hong Ha, Minister, Ministry of Natural Resources and Environment	Date*: 24 December 2018*

[6] Each Party shall designate and communicate to the secretariat the authority that will endorse on behalf of the national government the projects and programmes proposed by the implementing entities.

SOCIALIST REPUBLIC OF VIET NAM
MINISTRY OF NATURAL RESOURCES AND ENVIRONMENT

Hanoi, 18 December 2018

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

Subject: Endorsement for the Concept Proposal on "Enhancing the resilience, inclusive and sustainable eco-human settlement development through small scale infrastructure interventions in the coastal regions of the Mekong Delta"

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

Accordingly, I am pleased to endorse the above concept project proposal with support from the Adaptation Fund. If approved, the project will be implemented by United Nations Human Settlement Programme (UN-Habitat) and executed by Ministry of Natural Resources and Environment of Vietnam and national partners.

Yours sincerely,

Dr. Tran Hong Ha
Minister of Natural Resources and Environment
Socialist Republic of Vietnam

Address: 10 Ton That Thuyet street, South Tu Liem district, Ha Noi, Viet Nam
Tel: +84 4 37956868; Fax: +84 4 38359221; E-mail: icd-monre@monre.gov.vn; Website: http://www.monre.gov.vn

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 including Socio Economic Development Plan (2016-2020), National Climate Change Strategy, National Green Growth Strategy, National Action Plan on Climate Change for (2012-2020), and National Action Plan on Green Growth 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.
For [signature] OIC. **Raf Tuts** Director, Programme Division UN-Habitat
Date: January 3rd, 2019 | Tel. and email: +254-20-762-3726 Raf.tuts@un.org
Project Contact Person: Laxman Perera, Human Settlements Officer, UN-Habitat Regional Office for Asia and the Pacific (ROAP)
Tel: +81-92-724-7121 Email: Laxman.Perera@un.org

Annexes

Annex1. Climate Vulnerability

Issue		Vinh Trach Dong		Vinh Hau		Chau Thanh			
						Long Hoa		Hoa Minh	
Exposure	Flood	7	19.44%	15	27.27%	2	5.26%	1	5.26%
	Sea level rise	4	11.11%	15	27.27%	12	31.58%	8	42.11%
	Land erosion	1	2.78%	6	10.91%	9	23.68%	1	5.26%
	Salinity Intrusion	10	27.78%	5	9.09%	9	23.68%	2	10.53%
	Drought	7	19.44%	6	10.91%	2	5.26%	1	5.26%
	Storm	7	19.44%	8	14.55%	4	10.53%	6	31.58%
Total Comments		**36**		**55**		**38**		**19**	
Sensitivity	Damage of human life	6	31.58%	6	40.00%	0	0.00%	1	33.33%
	Economic loss (mainly livelihood)	13	68.42%	9	60.00%	3	100.00%	2	66.67%
Total Comments		**19**		**15**		**3**		**3**	
Adaptation Capacity	Awareness of Climate Change Impact	1	2.94%	5	15.15%	5	15.63%	5	15.63%
	Awareness of Climate Change Adaptation	0	0.00%	3	9.09%	7	21.88%	7	21.88%
Total participants		**34**		**33**		**32**			
Improvement Needs	Water Management	16	29.63%	10	15.87%	13	29.55%	10	29.41%
	Waste Management	2	3.70%	5	7.94%	3	6.82%	4	11.76%
	Housing	4	7.41%	11	17.46%	6	13.64%	4	11.76%
	Basic Infrastructure	9	16.67%	12	19.05%	6	13.64%	4	11.76%
	Eco-Friendly Environmental Protection	15	27.78%	19	30.16%	13	29.55%	11	32.35%
	Awareness Training	8	14.81%	6	9.52%	3	6.82%	1	2.94%
Total participants		**54**		**63**		**44**		**34**	

Annex2. Detailed sociodemographic data of Tra Vinh

NO.	District	Chau Than					
	Commune	Long Hoa			Hoa Minh		
		Population	Household	Feature	Population	Household	Feature
1	Total population	10,280			14,191		
2	Number of households		2,547			3,309	
3	Female rate	5,097		49.58%	6,385		44.99%
4	Under 17-year-old population	2,986		29.05%	3,027		21.33%
5	Working group population	6,417		62.42%	8,310		58.56%
	Male				4,586		18-60
	Female rate				3,724		18-55
6	Disabled, invalid and lost ability to work population	314		3.05%	256		1.80%
	Disabled	150			149		
	Invalid	52			36		
	Lost ability to work	112			71		
7	Indigenous population	-				55	
8	immigrant population				142		
9	Ethnic minority population	49	15	Khmer	56	16	sKhmer
10	Population, number of households in need for resettlement		136	in Con Phung village	1,544	386	
					419	103	Huu dyke
					924	231	Ta dyke
					201	52	Con Chim village
11	Population, number of households lacking access to clean water		2182	85.67%		1,166	35.24%
12	Rate of poor and near-poor households		311	12.21%		191	5.77%
	Poor		144	5.65%		72	2.18%
	near-poor		167	6.56%		119	3.60%
13	Income per capita			37.5 million VND/ year			41.8 million VND/ year
14	Main income source			Agriculture-Aquaculture			Agriculture-
15	Sectorial structure and household rate by sector						
	Agriculture		625	24.54%			
	Aquaculture		1,531	60.11%			
	Industry		67	2.63%			
	Construction		62	2.43%			
	Trade		96	3.77%			
	Transportation		28	1.11%			
	Other Sectors		138	5.42%			
16	Loss and damage caused by natural disaster and climate change	* 2 houses destroyed and 5 housed lost the roof because of tornadoes * water level rise, combined with tide destroyed the shore of 69 shrimp ponds, and 650m of dyke is in risk of land erosion			High tide (sea level rise), combined with rain and storm will affect 100% of households in Hoa Minh commune, particularly human - property loss and damage; the first areas to be affected will be Con Chim village, Ta and Huu dyke		

Annex3. Detailed sociodemographic data of Bac Lieu

NO.	District	Vinh Hau District		
		population	household	feature
1	Total Population	12,106		
2	# of household		2,835	
3	Number of Female	6,040		49.89%
4	# of age 0-17	2,808		23.20%
5	# of age 18-60	8,198		67.72%
6	# of age > 60	1,100		9.09%
7	# of local people	11,653		96.26%
8	# of disabled population	109		0.90%
9	# of immigrants	453		3.74%
10	# of people living in informal settlements	-		
11	# of people suffering from shortage of water	-		
12	# of minority (ethnic) group	3,818		31.54%
	Khmer	3,814	960	31.51%
	Hoa	1	1	0.01%
	Cao Lang	1	4	0.01%
	Tay	1	4	0.01%
	Thai	1	1	0.01%
13	Poverty Rate (%)		546	19.26%
	Poor		387	13.65%
	near-poor		159	5.61%
14	Livelihood resource	Fishery, Agriculture, Aquaculture, and small-scale trading		

Appendices

Appendices available upon your request for more detailed information

LIST OF CONTENTS