



ADAPTATION FUND

AFB/PPRC.36/21
15 September 2025

Adaptation Fund Board
Project and Programme Review Committee
Thirty sixth Meeting
Bonn, Germany, 7-8 October 2025

Agenda Item 4(s)

PROPOSAL FOR MOROCCO

Background

1. The Operational Policies and Guidelines (OPG) for Parties to Access Resources from the Adaptation Fund (the Fund), adopted by the Adaptation Fund Board (the Board), state in paragraph 45 that regular adaptation project and programme proposals, i.e. those that request funding exceeding US\$ 1 million, would undergo either a one-step, or a two-step approval process. In case of the one-step process, the proponent would directly submit a fully-developed project proposal. In the two-step process, the proponent would first submit a brief project concept, which would be reviewed by the Project and Programme Review Committee (PPRC) and would have to receive the endorsement of the Board. In the second step, the fully-developed project/programme document would be reviewed by the PPRC, and would ultimately require the Board's approval.

2. The Templates approved by the Board (Annex 5 of the OPG, as amended in March 2016) do not include a separate template for project and programme concepts but provide that these are to be submitted using the project and programme proposal template. The section on Adaptation Fund Project Review Criteria states:

For regular projects using the two-step approval process, only the first four criteria will be applied when reviewing the 1st step for regular project concept. In addition, the information provided in the 1st step approval process with respect to the review criteria for the regular project concept could be less detailed than the information in the request for approval template submitted at the 2nd step approval process. Furthermore, a final project document is required for regular projects for the 2nd step approval, in addition to the approval template.

3. The first four criteria mentioned above are:

- (i) Country Eligibility,
- (ii) Project Eligibility,
- (iii) Resource Availability, and
- (iv) Eligibility of NIE/MIE.

4. The fifth criterion, applied when reviewing a fully-developed project document, is:
(v) Implementation Arrangements.

5. It is worth noting that at the twenty-second Board meeting, the Environmental and Social Policy (ESP) of the Fund was approved and at the twenty-seventh Board meeting, the Gender Policy (GP) of the Fund was also approved. Consequently, compliance with both the ESP and the GP has been included in the review criteria both for concept documents and fully-developed project documents. The proposal template was revised as well, to include sections requesting demonstration of compliance of the project/programme with the ESP and the GP.

6. At its seventeenth meeting, the Board decided (Decision B.17/7) to approve "Instructions for preparing a request for project or programme funding from the Adaptation Fund", contained in the Annex to document AFB/PPRC.8/4, which further outlines applicable review criteria for both

concepts and fully-developed proposals. The latest version of this document was launched in conjunction with the revision of the Operational Policies and Guidelines in November 2013.

7. Based on the Board Decision B.9/2, the first call for project and programme proposals was issued and an invitation letter to eligible Parties to submit project and programme proposals to the Fund was sent out on April 8, 2010.

8. The following project concept document titled “Strengthening Climate Change Resilience of Urban Residential Neighborhoods in the Tangier-Tetouan-Al Hoceima Region” was submitted for Morocco by the United Nations Human Settlements Programme (UN-HABITAT), which is a Multilateral Implementing Entity of the Adaptation Fund.

9. This is the fifth submission of the project concept proposal using the two-step submission process.

10. The current submission was received by the secretariat in time to be considered in the forty-fifth Board meeting. The secretariat carried out a technical review of the project proposal, assigned it the diary number AF00000409, and completed a review sheet.

11. In accordance with a request to the secretariat made by the Board in its 10th meeting, the secretariat shared this review sheet with UN-Habitat, and offered it the opportunity of providing responses before the review sheet was sent to the PPRC.

12. The secretariat is submitting to the PPRC the summary and, pursuant to decision B.17/15, the final technical review of the project, both prepared by the secretariat, along with the final submission of the proposal in the following section. In accordance with decision B.25.15, the proposal is submitted with changes between the initial submission and the revised version highlighted.



ADAPTATION FUND

ADAPTATION FUND BOARD SECRETARIAT TECHNICAL REVIEW OF PROJECT/PROGRAMME PROPOSAL

PROJECT/PROGRAMME CATEGORY: Regular-sized Project Concept

Country/Region: Morocco
Project Title: Strengthening climate change resilience of urban residential neighbourhoods in the Tangier-Tetouan-Al Hoceima region
Thematic Focal Area: Disaster risk reduction and early warning systems
Implementing Entity: UN-HABITAT
Executing Entities: Ministry of National Territory and Urban Planning, Housing and City Policy
AF Project ID: AF00000409
IE Project ID: **Requested Financing from Adaptation Fund (US Dollars):** 9,171,939
Reviewer and contact person: UnaMay Gordon **Co-reviewer(s):**
IE Contact Person:

<p>Technical Summary</p>	<p>The project “Strengthening climate change resilience of urban residential neighborhoods in the Tangier-Tetouan-Al Hoceima region” aims to strengthen the resilience of the housing sector to climate change, with a focus on floods, marine submersion, and landslides. This will be done through the three components below:</p> <p><u>Component 1:</u> Strengthening urban resilience to climate change in vulnerable residential neighborhoods (USD 6,020,000);</p> <p><u>Component 2:</u> Awareness, communication, and capacity building (USD 950,000);</p> <p><u>Component 3:</u> Monitoring, evaluation, and capitalization of experience in adaptation (USD 750,000).</p> <p><u>Requested financing overview:</u> Project/Programme Execution Cost: USD 733,400 Total Project/Programme Cost: USD 8,453,400 Implementing Fee: USD 718,539 Financing Requested: USD 9,171,939</p>
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	<p>The initial technical review highlighted several key issues, including the need to clarify the project's objectives and proposed activities, improve alignment between the identified climate change challenges, the project's scope, and its target beneficiaries, and provide a more detailed analysis of the specific challenges and climate vulnerabilities affecting the housing sector in the targeted area. Additionally, the review raised concerns about the project's cost-effectiveness, compliance with the Adaptation Fund's Environmental and Social Policy (ESP) and Gender Policy (GP), and inconsistencies in the budget. These concerns are detailed in the Clarification Requests (CRs) and Corrective Action Requests (CARs) included in the review.</p> <p>The second technical review found that some of the issues raised in the initial review were not addressed such as proposed activities, adaptation rationale, compliance with the Adaptation Fund's Environmental and Social Policy (ESP), details in the budget. The proposal requires significant improvement. The entire document needs to be thoroughly reviewed and restructured to enhance readability and coherence. These concerns are detailed in the Clarification Requests (CRs) and Corrective Action Requests (CARs) included in the review.</p> <p>The third technical review found that most of the issues raised in the second review were adequately addressed except compliance with the Adaptation Fund's Environmental and Social Policy (ESP), consultative processes with vulnerable groups, specification of relevant national technical standards, and ensuring Implementing Entity Management Fee cap, among others. The overall proposal has enhanced significantly with some minor supplementation required. The remaining areas of improvement are detailed in the CRs and CARs included in the review.</p> <p>The fourth technical review finds that the proposal has addressed most of the CRs and CARs requests. However, some areas still need further clarification, namely the compliance with Adaptation Fund's Environmental and Social Policy (ESP) needs to be addressed, alignment with results framework of the AF and a clarification on USPs.</p> <p>The fifth technical review finds that the remaining CRs/CARs indicated in the fourth review are adequately addressed.</p>
Date:	July 22, 2025

Review Criteria	Questions	Comments Third Technical Review February 26, 2025	Comments Fourth Technical Review June 10, 2025	Comments Fifth Technical Review July 22, 2025
Country Eligibility	1. Is the country party to the Kyoto Protocol, and/or the Paris Agreement?	-	-	-
	2. Is the country a developing country particularly vulnerable to the adverse effects of climate change?	-	-	-
	1. Has the designated government authority for the Adaptation Fund endorsed the project/programme?	-	-	-
	2. Does the length of the proposal amount to no more than Fifty pages for the project/programme concept, including its annexes?	-	A general read-through to remove typographical errors throughout the document would enhance the presentation of the proposal.	-
	3. Does the project / programme support concrete adaptation actions to assist the country in addressing adaptive capacity to the adverse effects of climate change and	CR1: Cleared as per the information provided on page 5. CR3: Not Cleared The revised document only highlights the inclusion of commercial buildings	CR1: Not cleared. Please further clarify the lone sentence on page 12 – “In addition to that, commercial buildings within the targeted areas will also benefit from the proposed interventions”.	CR1: Cleared

	<p>build in climate resilience?</p>	<p>within the Province of Tetouan while excluding other project areas. Please make the revision in the Project Beneficiaries or clarify if this is only specific to Tetouan (Page 10)</p> <p>CR6: Not cleared. Please make a reference to MnhPRA publication developed by GFDRR in parentheses or in footnote. Also, economic loss data is currently unavailable and this information is still missing.</p> <p>CR10: Cleared as per information provided on page 16 in Component 1.</p> <p>CR13: Cleared as per information provided on page 16 and 17.</p>		
	<p>4. Does the project / programme provide economic, social and environmental</p>	<p>CR 18: Cleared as per information provided on page 20-22.</p>	-	-

	benefits, particularly to vulnerable communities, including gender considerations, while avoiding or mitigating negative impacts, in compliance with the Environmental and Social Policy and Gender Policy of the Fund?			
	5. Is the project / programme cost effective?	CR21: Cleared as per information provided on page 25-28.	-	-
	6. Is the project / programme consistent with national or sub-national sustainable development strategies, national or sub-national development plans, poverty reduction strategies, national communications and adaptation programs of action and other relevant instruments?	-	CRNEW1: Please strengthen Part II Section D-Consistency with key national documents by specifically aligning this project with the key documents and strategies. Outlined.	CRNEW1: Cleared as per pages 29-31.

	7. Does the project / programme meet the relevant national technical standards, where applicable, in compliance with the Environmental and Social Policy of the Fund?	CAR3: Not Cleared. The information provided on the response sheet is not included in its entirety on page 15 and 31. The flow of the document can be enhanced by listing out the codes and regulations in a single section within the proposal. A table could be a good way to organize everything.	CAR3: Not Cleared. The information on page on Page 32 (Table 5) is well noted. However, please specifically indicate how this project with address the requirements of these national standards.	CAR3: Cleared as per Table 5 pages 31-32, which also outlines how the project will ensure compliance.
	8. Is there duplication of project / programme with other funding sources?	CR22: Cleared as per information provided on page 31.	-	-
	9. Does the project / programme have a learning and knowledge management component to capture and feedback lessons?	CR23: Cleared as per information provided in page 18 and page 34. CR24: Cleared as per information provided in page 18 and page 34.	-	-

	<p>10. Has a consultative process taken place, and has it involved all key stakeholders, and vulnerable groups, including gender considerations in compliance with the Environmental and Social Policy and Gender Policy of the Fund?</p>	<p>CAR4: Not cleared.</p> <p>Although information on marginalized group and women has been thoroughly supplemented, the table needs revision in the following items such as <i>topics discussed</i> and <i>outcomes</i>; the information provided doesn't match with respective items. It can also be strengthened by highlighting the stakeholders represented in the consultative meetings for different groups within the Summary Table as a 'Stakeholders' column in place of Consultation 1 and 2 (For example, the Women groups or societies present). Also, please replace the third column with a brief explanation of how the outcomes</p>	<p>CAR4: Not Cleared.</p> <p>The information on page 37 (Table 7) regarding listing topics and outcomes and stakeholders is well noted.</p> <p>However, please ensure that all relevant women's groups are clearly identified, as the current list mentions a 'women's association'. If they are already included, kindly make this more explicit. If there is gender machinery in the country, then they should also be included.</p>	<p>CAR4: Cleared as per information provided in Part II.G.</p>
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		<p>were considered in project design.</p> <p>CAR5: Cleared as per the information provided on page 35.</p> <p>CR25: Cleared as per the information provided on page 35.</p>		
	<p>11. Is the requested financing justified on the basis of full cost of adaptation reasoning?</p>	<p>CR26: Not cleared.</p> <p>1. The information in Table 6 (page 36) has been thoroughly supplemented . However, the introductory paragraph preceding Table 6 remains unclear. Please revise</p>	<p>CR26: Cleared</p> <p>As per updated paragraph on pages 39-40.</p>	<p>-</p>

		<p>it for improved readability.</p> <p>2. Please adjust the level of Project Outcomes to Outcome 1, Outcome 2 and Outcome 3 as there are no sub-outcomes.</p>		
	<p>12. Is the project / program aligned with AF's results framework?</p>	<p>CAR6: Not cleared.</p> <p>1. The Project Objective Indicator associated with AF Outcome 4 is missing. Please update the indicator as appropriate.</p> <p>2. AF Output 2.1 is introduced without associated Outcome 2. Please address it as appropriate.</p>	<p>CAR6: Not cleared.</p> <p>Table 10 is updated with an Outcome 2. However, please amend the wording for AF Outcome 4 and AF Outcome 8 to reflect the working in the results alignment table guidance document.</p>	<p>CAR6: Cleared as per changes in Table 10.</p>

	<p>13. Has the sustainability of the project/programme outcomes been taken into account when designing the project?</p>	<p>CAR8: Cleared as per information provided in page 37-38.</p>	<p>-</p>	<p>-</p>
	<p>14. Does the project / programme provide an overview of environmental and social impacts / risks identified, in compliance with the Environmental and Social Policy and Gender Policy of the Fund?</p>	<p>CAR9: Not cleared</p> <p>Please thoroughly complement the information provided in Table 5 (page 39) using AF ESP as a guide.</p> <p>For <i>Marginalized and Vulnerable Groups</i>, the information provided is more relevant to <i>Access and Equity</i> item. Please explain how the project avoids imposing any disproportionate adverse impacts on marginalized and vulnerable groups.</p> <p>For <i>Human Rights</i>, please address issues cited in Human Rights Council Special Procedures like torture, arbitrary</p>	<p>CAR 9 – Not cleared.</p> <p>Acknowledging the amendments made to principles related to Marginalised and Vulnerable Groups and Human Rights, and Gender;</p> <ol style="list-style-type: none"> 1. Please ensure that Table 9 is fully aligned with the narrative presented above it. 2. In Table 9, kindly specify the initial risk rating (e.g., medium or low) in the third column for each risk identified. 3. For Marginalized and Vulnerable Groups, explicitly state the specific risk—based on your narrative, this appears to relate to social exclusion. 4. Please uncheck “Gender Equality and Women’s Empowerment” as 	<p>CAR9: Cleared as per changes in Table 9.</p> <p>Given that locations are yet to be determined, the project proponent should refer to the guidance document on USP. Implementing entities are encouraged to consult with the Adaptation Fund secretariat on matters related to USPs during full project/programme formulation.</p>

		<p>detention, and limitations on freedom of expression and how the project will manage these human rights issues. Also, please provide background on 'land use right'. Is it related to <i>indigenous people</i> or <i>Involuntary resettlement</i>?</p> <p>Depending on its context, the information should be reorganized under pertinent safeguard item.</p> <p>Please consider that in order to determine if the gender aspirations of the project are being maintained that additional assessments and monitoring will be required and amend table 7 accordingly.</p> <p>Please find the link for guidance document on AF ESP: https://www.adaptation-</p>	<p>additional assessments will be conducted during project preparation.</p> <ol style="list-style-type: none"> 5. Does the project involve Indigenous Peoples? If not, please indicate this and provide a brief justification for why no risk is anticipated. 6. One page 16 under component 1 the narrative suggests that not all the project activities identified. Please consult the AF guidance on USP and amend the narrative under Component 1 as well as part II Section J accordingly. The guidance is available at 7. Guidance Document for Project/Programme with Unidentified Sub-Projects 	
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		fund.org/document/guidance-document-implementing-entities-compliance-adaptation-fund-environmental-social-policy/		
Resource Availability	1. Is the requested project / programme funding within the cap of the country?	-	-	-
	2. Is the Implementing Entity Management Fee at or below 8.5 per cent of the total project/programme budget before the fee?	CAR13: Not cleared In the Project/Programme Components and Financing table-1, please revise IE Fee and Execution Fees as there is a mix up in the use of the terminology.	CAR13: Cleared. As per information on Page 13 (Table 1).	-

		Refer to https://www.adaptation-fund.org/wp-content/uploads/2021/01/Instructions-for-Preparing-a-Request-for-ProjectProgramme-Funding_Oct-2017.pdf for proper definition of the terms where Project Cycle Management Fee basically refers to the IE Fee (8.5%) not Execution Cost (9.5%).		
	3. Are the Project/Programme Execution Costs at or below 9.5 per cent of the total project/programme budget (including the fee)?	-	-	-
Eligibility of IE	1. Is the project/programme submitted through an eligible Implementing Entity that has been accredited by the Board?	-	-	-
Implementation Arrangements	1. Is there adequate arrangement for project / programme			

	management, in compliance with the Gender Policy of the Fund?			
	2. Are there measures for financial and project/programme risk management?			
	3. Are there measures in place for the management of for environmental and social risks, in line with the Environmental and Social Policy and Gender Policy of the Fund?			
	4. Is a budget on the Implementing Entity Management Fee use included?			
	5. Is an explanation and a breakdown of the execution costs included?			
	6. Is a detailed budget including budget notes included?			
	7. Are arrangements for monitoring and evaluation clearly defined, including budgeted M&E plans and sex-disaggregated data,			

	targets and indicators, in compliance with the Gender Policy of the Fund?			
	8. Does the M&E Framework include a break-down of how implementing entity IE fees will be utilized in the supervision of the M&E function?			
	9. Does the project/programme's results framework align with the AF's results framework? Does it include at least one core outcome indicator from the Fund's results framework?			
	10. Is a disbursement schedule with time-bound milestones included?			



CONCEPT NOTE PROPOSAL FOR SINGLE COUNTRY

PART I: PROJECT/PROGRAMME INFORMATION

Title of Project/Programme: Strengthening climate change resilience of urban residential neighborhoods in the Tangier-Tetouan-Al Hoceima Region

Country: Morocco

Thematic Focal Area: Disaster risk reduction and early warning systems

Type of Implementing Entity: Multilateral Implementing Entity

Implementing Entity: UN-HABITAT

Executing Entities: Ministry of National Territory and Urban Planning, Housing and City Policy

Amount of Financing Requested: 9,171,939 (in U.S Dollars Equivalent)

Project Formulation Grant Request (available to NIEs only): Yes No

Amount of Requested financing for PFG: (in U.S Dollars Equivalent)

Letter of Endorsement (LOE) signed: Yes No

NOTE: LOEs should be signed by the Designated Authority (DA). The signatory DA must be on file with the Adaptation Fund. To find the DA currently on file check this page: <https://www.adaptation-fund.org/apply-funding/designated-authorities>

Stage of Submission:

- This concept has been submitted before
- This is the first submission ever of the concept proposal

In case of a resubmission, please indicate the last submission date: [Click or tap to enter a date.](#)

Please note that concept note documents should not exceed 50 pages, including annexes.

Project/Programme Background and Context:

Main issues and needs

The Tangier-Tetouan-Al Hoceima (TTA) region in Morocco faces significant challenges due to its vulnerability to climate change. The main issues include frequent climate hazards such as floods, droughts, landslides, and marine submersion. These hazards cause extensive damage to infrastructure, particularly in the housing sector, leading to economic losses and adverse social impacts. For instance, the average annual loss due to flooding in the TTA region is estimated at 339 -million DH/year, with the residential sector accounting for the highest losses.

The primary needs in the TTA region are to enhance the resilience of the housing sector to climate change and to mitigate the impacts of climate hazards. There is a critical need for improved urban planning and infrastructure development to withstand extreme weather events. Additionally, there is a need for increased funding and resources to implement effective climate adaptation measures. The region's rapid urbanization, with an urban population growth rate of 2.29% annually, exacerbates these vulnerabilities.

The aim of this project is to strengthen the resilience of the housing sector in the TTA region by addressing the vulnerabilities and risks associated with climate change. The project will focus on enhancing the capacity of urban areas to cope with floods, marine submersion, and landslides. By implementing targeted adaptation measures, the project seeks to reduce the damage and losses caused by climate hazards, improve living conditions for residents, and support sustainable development in the region.

Geography and climate

Morocco is located in southwest of the Mediterranean region, at the northwestern part of Africa. Morocco is bordered to the north by the Mediterranean Sea, to the west by the Atlantic Ocean, to the east by Algeria and to the south and south-east by Mauritania. The country has a long coastline that extends more than 3,500 km. The total land area of the country is about 710,850 ~~km~~km² (8% forests, 13% agricultural lands and 65% pastures, rangelands and deserts).

Morocco is characterized by a Mediterranean climate, with mild and relatively wet winters, and hot to dry summers. The climate shows enormous variations from sub-humid in the North to Saharan in the South. This diversity is due to the combination of several factors, namely its latitudinal location, the influence of the Atlantic Ocean and the Mediterranean Sea, and the influence of elevation through Atlas and Rif mountains. Spatial and temporal rainfall variability is considerably important. The average annual rainfall ranges from less than 100 mm (Saharan bioclimatic stage) to 1200 mm (humid bioclimatic stage). The rainy season lasts from October to March in most of the country, where maximum rainfall is between December and February. The summer months have low rainfall and are stormy in general.

The Tangier-Tetouan-Al Hoceima (TTA) region is located in the northwest of Morocco and is bounded to the north by the Strait of Gibraltar and the Mediterranean, to the west by the Atlantic Ocean, to the southwest by the Rabat-Sale-Kenitra region, to the southeast by the Fez-Meknes region and to the east by the Oriental region. It covers 17,262 ~~km~~km² and represents 2.43% of the national territory. The region consists of two prefectures and six provinces including provinces of Tétouan, Chefchaouen, and Al Hoceima.

The climate of the Tangier-Tetouan-Al Hoceima (TTA) is Mediterranean with an oceanic influence. Temperatures remain mild in winter and moderate in summer, both along the coast and at higher altitudes. In January, temperatures rarely drop to 0°C, with the most common maximum temperatures ranging between 14°C and 18°C. In summer, the atmosphere warms noticeably, with the most frequent maximum temperatures happening in July ranging between 16°C and 26°C. The average annual rainfall is 900 mm, varying from 1,800 mm in the high mountain areas to 600 mm around Jebha. Snowfall occurs above 1,000 meters in altitude.

Climate change trends, projections and impacts

Morocco is located in the MENA/Arab region, which is one of the most vulnerable regions to climate change impacts. The increasing frequency of natural disasters and extreme weather events coupled with the social and economic challenges related to increasing poverty, ~~urbanisation~~urbanization, and population growth continue to increase the vulnerability of the region. Although Morocco's contribution to GHG emissions is low, it is very vulnerable to and is already suffering from the negative impacts of climate change. According to climate projections, climate change impacts in Morocco are expected to intensify during the coming years.

Morocco faces several types of climatic hazards, such as droughts floods, forest fires and landslides, in addition to extreme weather events, such as heat/cold waves, and sandstorms. These hazards and extreme events lead to severe impacts and considerable economic, social and environmental damage and loss. The assessment of current and projected impacts and vulnerabilities to climate change that has been carried out on various key sectors (water resources, agriculture, fisheries, forestry and biodiversity, coastline, habitat, and health), highlights the Kingdom's vulnerability to climate change. Furthermore, Morocco as a Mediterranean country, is highly impacted by sea level rise that leads to marine submersion and causes severe floods in coastal areas. These climate hazards occur in very populated and dense areas resulting in costly damages and losses. In addition to the resulting floods, sea level rise causes saltwater intrusion into the aquifers and groundwater, which results in water salinization, degradation of the water quality and therefore loss of fresh water. Morocco already suffers from water scarcity, where the impacts of sea level rise further deplete freshwater to critical levels.

The TTA region is one of the most vulnerable to climate risks in the country, given its geographical position and its sensitive natural resources and socioeconomic conditions. As mentioned in figures 1 and 2, according to RCP 8.5 scenario, the region's temperature will increase while precipitation will significantly decrease by 2050. Moreover, the region experienced several climate related hazards, such as floods, landslides, sea level rise, sea surges, shoreline erosion, as well as forest fires (MATNUHPV, 2021). These climatic hazards have become recurrent and destructive in the TTA region, causing considerable damage and losses over the past twenty years. Therefore, climate change related vulnerabilities and risks are a source of concern for the authorities, who have to deal with strong demographic pressure and the increasingly intensifying impacts of climate change on various sectors, including the housing sector.

Water resources are experiencing a decline of about 25% due to the impacts of climate change. For fisheries, a global comparative study of vulnerability of national economies conducted by Allison et al (2009) ranks Morocco as the 11th most vulnerable country to climate change. Climate change also has harmful impacts on forests, ecosystem architecture, and the distribution of species, which could lead to a decline in livelihoods and increased exposure to extreme events. In addition, the housing sector will be more subjected to various climatic hazards by 2050, such as floods, drought, etc., according to the projections of the Ministry of National Territory, Urban Planning, Housing and City Policy (MATNUHPV, 2020).

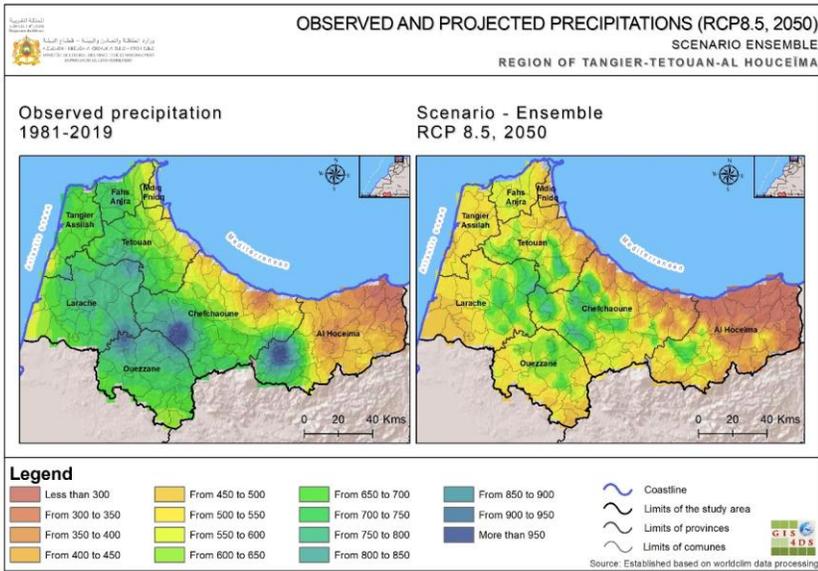


Fig 1. Observed and projected precipitation TTA in 2050

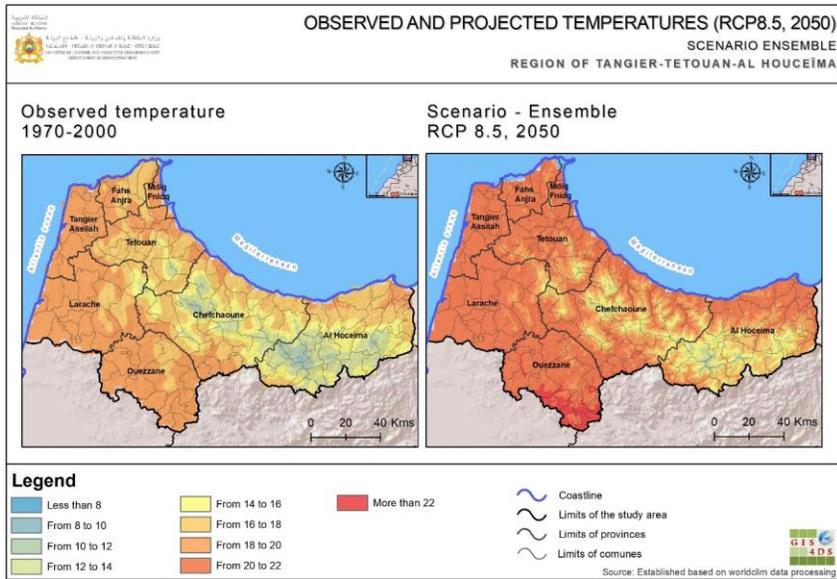


Fig 2. Observed and projected temperatures TTA to 2050 (RCP8.5)

The housing sector is characterized by several weaknesses and gaps that intensify its vulnerability to climate change. With more than 65% of the population living in urban areas, the TTA region is experiencing rapid urbanization, exacerbating climate vulnerabilities. By 2050, this figure is expected to reach 73.6%, increasing pressure on urban infrastructure. The region is known for several informal settlements that are often the most vulnerable and require particular attention. Furthermore, although the region has two adaptation plans (a territorial climate plan and an adaptation plan for the housing sector), the funds required to implement these two plans are insufficient.

The weaknesses and gaps that intensify vulnerabilities and risks have been analyzed and assessed as part of the study for the development of the Climate and Housing Plan for the TTA region. This analysis revealed that the housing sector is highly exposed to climate change, particularly rising temperatures, decreasing precipitation, sea level rise, floods, and landslides. The geographical distribution of these hazards is illustrated in Figure 3. For example, the TTA region has experienced periods of flooding and sea surges that are likely to continue in the future, according to the projections that have been made and illustrated in figure 3. The same figure shows areas that could be submerged by 2100, according to RCP 8.5, with submersion levels being relatively higher on the Atlantic side than on the Mediterranean side.

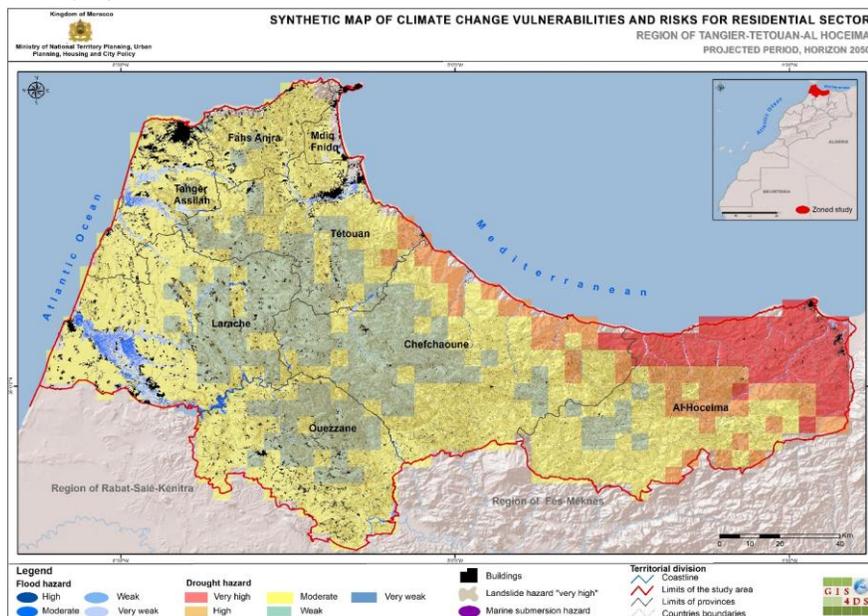


Fig 3. Synthetic map of climate change vulnerabilities and risks for the residential sector

The municipalities identified in this study are also characterized by their fragility, which is linked to the nature of the constructions, their age, and the lack of regular maintenance. Moreover, the high exposure of housing is further amplified by significant biophysical sensitivity, resulting from the marl substrate and the area's topography. The region is marked by very low permeability and steep slopes, leading to intense surface runoff and recurrent flooding.

Buildings in residential areas are not always designed to maintain their performance (mechanical,

thermal, etc.) in case of flooding. They are vulnerable to prolonged contact (from a few hours to several days) to flood frequencies and to the static effects (water height at the level of the buildings) and dynamics effects (water flow speed, shocks of floating objects). The furniture and internal equipment of these buildings are also vulnerable to flooding. Impacts similar to those of floods can be generated by the rise in sea level. Direct damage is generally significant for individual buildings, as well as on a territorial scale. A simulation of expected damage resulting from flood using Moroccan Probabilistic Risk Assessment platform (World Bank (2014), Strengthening of resilience in Morocco: input on an integrated risk management strategy, Washington, D.C.), show that the average annual loss due to flooding in the three provinces amounted to 333,020,720 ~~DH~~MAD/year, broken down as follows: 323,867,750 ~~DH~~MAD in Tétouan, 6,522,200 DH/year in Al Hoceima and 2,630,770 ~~MAD~~DH/year in Tangier. The highest losses of around 227,793,830 ~~DH~~MAD/Year were recorded in the residential sector, while losses in the commercial sector amounted to 74,383,480 ~~DH~~MAD/year. The remainder was recorded in other land use types. (MnhPRA, GFDRR, 2013)

In addition to these biophysical conditions, there are significant socioeconomic vulnerabilities, mainly due to the region's high population density and elevated poverty rates. Furthermore, according to the ~~af~~orementioned ~~stud~~y, the adaptive capacity of the municipalities considered in this analysis remains very low. Without sufficient adaptation measures and investments to improve the resilience of buildings, their vulnerability will only increase. Climate change threats directly affect populations through the destruction of homes and infrastructure and loss in human lives caused by extreme weather events.

Social context

Morocco's population has reached 36,828,330 on September 1, 2024 (General Population and Housing Census (GPHC), 2024), compared to 33,848,242 people in 2014. Historically, the population of Morocco doubled in 60 years from 5 million at the beginning of the 20th century to 11.6 million in 1960, then it tripled from 11.6 million to 33.8 million in 2014. According to the General Population and Housing Census (GPHC), the number of households has reached 9,275,038 according to the GPHC 2024 versus 7,313,806 in 2014 GPHC. In 2017 the urbanization rate in Morocco was 62%, with Higher Planning Commission (HPC) projections foreseeing that it will increase to 73% 2050. Despite the increase in population since 1960, the annual population growth rate of has shown a decreasing ~~trend~~ ~~from~~ ~~2.6%~~ between 1960 and 1971 to 1.25% between 2004 and 2014 and 0.85% between 2014 and 2024. Conversely, housing production is increasing annually at a rate of 1.1% between 2010 and 2020 and should reach 0.9% between 2020 and 2030HPC (Higher Planning Commission). The extension of urban zones could be spread over areas threatened by hazards. It is therefore important to strengthen the resilience of this area and its residents ~~in order to~~ reduce the damage and losses caused by climatic hazards.

According to the results of the GPHC conducted in 2024, the population of the TTA region is about 4,030,222 people, representing 10.9% of the national population in 2024. It is one of the most populated regions of Morocco with a relatively high density of 233.5 people/km² in 2024. This region has experienced an accelerated urbanization trend resulting from the strong growth of its urban population, following the development of commercial, industrial and administrative activities, essentially in all major cities of the region. According to the GPHC, the urban area in the region was home to 2,638,815 inhabitants in 2024, compared to 1,391,407 in rural areas. Thus, 107.1% of the regional population growth during the period 2014-2024 is due to the increase in the urban population. The annual urban population growth rate is 2.29% compared to a slight decrease of 0.24% in rural areas. In addition to the natural population growth in this region, this increase is also due to the extension of the urban perimeters of municipalities and districts, and by the creation of new urban centers in rural areas during the period 2004-2014. Thus, the urbanization rate in the region reached 59.9% in 2014 against 60.4% at the national level, with remarkable differences between provinces and prefectures. Indeed, the prefectures of Tanger-Assilah and M'diq-Fnideq are the most urbanized with urbanization rates of 94.3% each (GPHC, 2014). In terms of

shantytowns in urban areas, Chefchaouen province includes 1.4% of shantytown or summary-type households. This percentage is around 1.1% in the province of Tétouan.

Economic context

The building and public works sector contributes significantly to Morocco's economic growth by participating in 6.2% of total value added at current prices. It employed more than one million people in 2017, or 9.8% of the employed population. Indeed, housing production is evolving in parallel with the growth of Morocco's population.

Natural population growth, the creation of new urban centers, the development of industry and services in cities, and the rural migration in search of jobs in urban areas explain the increase in the urbanization rate, which is reflected in the increase in demand for housing and tertiary buildings. In 2016, the number of building permits reached 110,677 with a built-up area of 5,986,031 m². However, the real estate sector experienced a 2.54% decline in production and construction in 2017 compared to 2008. In parallel to this decline, cement sales have also decreased and have experienced an average growth of -0.70% between 2009 and 2017 varying between 14.52 Mtonnes in 2009 and 13.79 Mtonnes in 2017.

The housing sector contributes to the growth of the banking sector, which recorded an outstanding housing credit of 211.9 billion ~~DH~~MAD (approx. 21.2 billion USD) at the end of May 2019. This is due to the fact that the housing sector has an attractive financial framework and incentives for investors and the middle-income population due to the creation of the guarantee funds including:

- FOGARIM Guarantee Fund which guarantees credits accorded by banking establishments for the financing of housing acquisition for the benefit of low or non-regular income populations.
- FOGALOGUE Guarantee Fund which guarantees bank loans for financing the acquisition of housing or land and/or its construction, in favor of the middle class and Moroccans Residing Abroad (MRA).
- FOGALEF guarantee fund which guarantees loans accorded by banking institutions for the financing of the accession to property of the members of the Mohammed VI Foundation for the Promotion of Social Works of Education-Training.

Project target area and beneficiaries

The project will be carried out in the TTA Region, in specific districts that are vulnerable and highly exposed to climate hazards. The districts will be identified according to a risk assessment study that will be carried out within the development of Habitat Climate Plan, and according to a participatory approach involving all stakeholders.

➤ Province of Tetouan

The province of Tetouan is located in the extreme north of Morocco and covers an area of 2,541 km². It is bordered to the north by the prefecture of M'diq-Fnideq and the province of Fahs Anjra, to the east by the Mediterranean Sea, to the south by the provinces of Chefchaouen and Larache, and to the west by the prefecture of Tanger-Assilah. Characterized by a predominantly mountainous landscape with a rugged and harsh topography, the province of Tetouan has a Mediterranean climate and experiences a wet and rainy season with an average interannual rainfall exceeding 700 mm, while temperatures vary on average between 5.3° and 32.9°. According to the latest administrative division, the province of Tetouan is composed of 2 municipalities (Tetouan and Oued Laou) and two rural circles grouping 8 caïdats and 20 rural municipalities.

In 2014, the population of the province of Tetouan was 550,374 inhabitants (49.8% females) representing 15.5% of the population of the TTA Region and 1.6% of the national population. Thus, the province of Tetouan stands out as the second most populated province/prefecture in the region (RGPH 2014). Based on the 2019 population census, the province of Tetouan had a population of 573,784 inhabitants, representing 15.2% of the regional population. The urban population amounts to 416,988 inhabitants, reflecting an urbanization rate of 72.7%, against 61.8% in the region (HCP).

In this province, the project focuses on the commune of Tetouan, which is highly exposed to climate change risks including flooding, drought, marine submersion and heat and cold waves (based on the multi-criteria analysis in Annex 2). In addition, it is characterized by a large number of households and a very high density of buildings. Within this municipality, the Coelma neighborhood has been chosen as a potential area for the scope of this project as it is highly exposed to the risk of flooding.



Fig 4. Example of area at risk of flooding in the Municipality of Tetouan (Coelma neighborhood)

➤ Province of Chefchaouen

Located in northwest Morocco, on the massif of the country of Jebala, the province of Chefchaouen covers an area of 3,443 km². It is bordered to the northwest by the province of Tetouan, to the northeast by the Mediterranean Sea with a coastline of 120 km, to the east by the province of Al Hoceima, to the southeast by the province of Taounate, to the southwest by the province of Ouezzane and to the west by the province of Larache. The province of Chefchaouen is characterized by its mountains formed of siliceous and limestone layers with very uneven peaks sometimes exceeding 2000m. Located at 600m above sea level, Chefchaouen is characterized by a Mediterranean climate experiencing rainy and cool winters with an average annual rainfall of 880 mm and an average annual temperature of 16.6 °C. According to the latest administrative division of 2009, the province of Chefchaouen consists of a commune (Chefchaouen) and 5 circles grouping 12 caïdats and 27 rural municipalities. In 2014, the population of the province of Chefchaouen was 457,432 inhabitants (48.3% females) or about 12.8% of the total population of the TTA region and 1.3% of the national population. Compared to 2004, this population has recorded an average annual increase of 0.79% with a provincial urbanization rate of 12.5% (RGPH, 2014).

According to the results of the multi-criteria analysis (Annex 2) conducted at the level of the TTA region, Chefchaouen is highly exposed to climate change risks including drought, landslides and heat and cold waves. It is also characterized by a large number of households with a very high multidimensional poverty rate and a moderate building density. Within this municipality, the Ain Haouzi neighborhood has been ~~chosen~~ chosen as a potential area of intervention for this project as it is highly exposed to the risk of landslides.

Recently, this area was severely affected by a large-scale landslide, causing significant material damage to roads, residential buildings, public infrastructure, and facilities. The interventions carried out so far have made it possible to stabilize part of the site, covering an area of 2.50 hectares, with a total intervention cost of ~~MAD~~ 16,992,786.30 MAD (including taxes). However, these efforts remain insufficient given the magnitude of the risk. Therefore, it is essential to plan additional actions requiring supplementary funding to carry out the works, as estimated in the report by the engineering consultancy firm (BET) at ~~MAD~~ 12 million MAD. Further mobilization of technical, human, and financial resources is crucial to ensure the long-term protection of the residents of the Ain Haouzi neighborhood.



Fig 5. Example of areas at risk of landslides in the Municipality of Chefchaouen (Ain Haouzi neighborhood)

➤ **Province of Al Hoceima**

The province of Al Hoceima is located in the extreme north of Morocco and covers an area of 3,550 ~~km~~^{km}². It is bordered to the west by the province of Chefchaouen, to the north by the Mediterranean Sea, to the east by the province of Driouch and to the south by the provinces of Taza and Taounate. Due to its location in the center of the Rif Mountain range, the Al Hoceima is characterized by a Mediterranean climate, where rainfall varies between 300mm and 1000mm, and temperature varies between 10°C and 30°C.

According to the latest administrative division, the province of Al Hoceima consists of 5 municipalities (Al Hoceima, Bni Bouayach, Imzouren, Targuist and Ajdir) and 4 circles comprising 17 caïdats and 31 rural municipalities. In 2014, Al Hoceima's population was 399,654 inhabitants (50.1% females) or about 11.2% of the total population of the TTA region and 1.2% of the national population (RGPH, 2014). This population grew at an average annual rate of 0.1% during the intercensal period 2004-2014 and the provincial urbanization rate was 34.4%.

According to the multi-criteria analysis (Annex 2) Al Hoceima is highly exposed to climate change risks including landslides ~~and~~ heat and cold waves. In addition, it is characterized by a very large number of households and a very high building density. Within this municipality, the Tassendayt neighborhood has been chosen as a potential area for intervention of this project as it is highly exposed to the risk of landslides.

To assess the occurrences of this natural hazard (landslide), an in-depth study appears necessary. However, we can roughly estimate the potential economic losses caused by this type of hazard (landslide) by referring to similar past experiences, such as those that occurred in the city of Al Hoceima in a comparable site exposed to the same natural risk (e.g., Sidi Mansour).

During heavy rainfall in 2008, a major landslide occurred at the base of the Sidi Mansour slope. This phenomenon, which extended over a hundred meters with a drop of 10 meters, swept away an entire section of the road leading to Izemouren over ~~a distance of approximately~~^{approximately} fifty meters. The sudden manifestation of this collapse is clear evidence of the inherent instability of the slope. In addition to the steep gradient, the basal boundaries of the megablocks are also in

contact with a southward dip, which makes them particularly susceptible to movement.

Following this event, the site was redeveloped by reconstructing the main road and implementing environmental protection measures (retaining wall, slope stabilization, etc.) under the supervision and monitoring of local authorities and relevant services. The cost of the aforementioned works is estimated between 10 and 15 million dirhams (MAD).



Fig 6. Example of area at risk of landslides in the municipality of Al Hoceima (Tassendayt neighborhood)

➤ **Project beneficiaries**

The direct project beneficiaries are residents of urban residential areas. However, local communities, municipal authorities and regional housing departments will also benefit indirectly by strengthening their capacity to manage climate risks. They will also benefit from reduced costs linked to climate impacts, hazard-informed urban planning, and increased citizen confidence. In addition to these direct beneficiaries, several other stakeholders will also benefit from the project, this includes:

- **Keys stakeholders:** Ministry of Interior; Wilaya: Regional Council; Ministry of National Territory, Urban Planning, Housing and City Policy; Regional Inspectorate of Town Planning, Architecture and Territory Planning; Urban Agencies; Territorial communities; Regional Meteorological Department; Regional Environment Department; and Regional Department of the National Agency for Water and Forests.
- **Secondary stakeholders** include Moroccan Agency for Energy Efficiency; Regional Department of Equipment, Transport and Logistics; Private sector (construction companies, energy companies, etc.); Civil society and NGOs; and Insurance companies.
- It is worth mentioning that the list of stakeholders from the housing sector covers several entities: the National Council of the Order of Architects and its regional representation in the TTA region; the Moroccan Federation of Consulting and Engineering and its regional representation in the TTA region, encompassing engineering and consulting firms; the Federation of Construction Materials Industries, which includes construction material producers; the National Federation of Real Estate Developers and its regional representation in the TTA region; the National Federation of Building and Public Works and its regional representation, which includes construction companies; and the National Order of Surveying Engineers. These federations and professional associations will mobilize professionals in the region to participate in the project (architectural design, technical studies, production of adapted construction materials, implementation of

solutions, etc.). They will also take part in training and awareness-raising actions planned within the project framework and contribute to the development of solutions and the project's sustainability. Existing research institutes in the region, such as Tétouan National School of Architecture, that have conducted studies on NbS or climate change adaptation will participate in studies, trainings, and awareness-raising actions and contribute to the development and sustainability of solutions.

• In addition to that, commercial buildings within the targeted areas will also benefit from the proposed interventions.

Project/Programme Objectives:

Overall objective

The project's overall objective is to strengthen the resilience of the housing sector to climate change throughout the TTA Region.

Sub-objectives

1. Strengthening urban resilience to climate change in vulnerable residential neighborhoods in the TTA Region

This is in line with the following AF outcomes:

- Outcome 1: Reduced exposure to climate-related hazards and threats

2. Awareness, communication and capacity building

This is in line with the following AF outcomes:

- Outcome 3: Strengthened awareness and ownership of adaptation and climate risk reduction processes at local level
- Outcome 4: Increased adaptive capacity of communities to respond to the impacts of climate change.

3. Monitoring, evaluation and capitalization of experience in adaptation

This is in line with the following AF outcomes:

- Outcome 7: Improved policies and regulations that promote and enforce resilience measures.
- Outcome 8: Support the development and diffusion of innovative adaptation practices, tools and technologies.

Although the project's main aim is to reinforce the residential neighborhoods resilience, commercial buildings located in these neighbourhoods are exposed to the same climatic hazards and suffer similar impacts. Thus, the projects/programs envisaged to reduce climate risks will be designed to apply to both residential and commercial buildings, ensuring that climate issues are fully addressed at the scale of the targeted neighbourhoods.

Project/Programme Components and Financing:

The proposed project will strengthen urban climate resilience by working with ~~multi-level stakeholders and ensuring strong participation, in particular, of~~ of the most marginalized and vulnerable groups, in all its phases – from conception to operations, and evaluation. The main activities will take place in the provinces of Tetouan, Chechaouen and Al Hoceima which are highly vulnerable to climate change. These provinces were selected in coordination with the national and local authorities with the participation of local communities, according to the following criteria: exposure to climatic hazards, total number of households, multidimensional poverty rate and building density (see annex 2). The selection of the municipalities was based on the criteria of vulnerability to climate change. The identification of marginalized and vulnerable groups, as well as Indigenous peoples in the targeted areas, was carried out through a participatory approach in coordination with national and local authorities. These criteria ensured a focus on areas with high vulnerability and significant needs.

At the design stage, consultations were held with local communities, including marginalized and vulnerable groups, to ensure their active involvement and input. This participatory process included discussions with local authorities and community representatives to identify specific needs and priorities, ensuring cultural appropriateness and alignment with local realities. The concerns and interests of these groups were integrated into the project design through the co-selection of activities by communities and local authorities. This approach guaranteed that the proposed interventions address their specific vulnerabilities while promoting environmental, social, and economic benefits. These efforts reflect a strong commitment to inclusivity, ensuring that the project supports and uplifts the most disadvantaged groups in the targeted areas.

The project components and financing details are listed in the table below.

Table 1: Project components and financing

Project/Programme Components	Expected Outcomes	Expected Outputs	Amount (US\$)
1. Strengthening urban resilience to climate change in vulnerable residential neighborhoods	1.1 Strengthened urban resilience in vulnerable residential neighborhoods	<p>1.1.1 Multi-sectoral area-based Urban analysis, identification and prioritization of residential neighborhoods are realized, basing on vulnerability diagnosis and risk assessment related to CC at municipal level.</p> <p>1.1.2 Buildings resilience is reinforced in response to flood, landslides, in vulnerable neighborhoods in the three municipalities.</p> <p>1.1.3 Integrated Nature based Solutions (NbS) to reduce run-off and adapt to increasing riverine floods and altered rain patterns are developed and implemented in the three municipalities, in collaboration with local stakeholders.</p> <p>1.1.4 Integrated Nature based Solutions (NbS) to reinforce soil stability and reduce landslide are developed and implemented in the three municipalities, in collaboration with local stakeholders.</p>	6,020,000
2. Awareness, communication, and capacity building	2.1 Stakeholders are fully informed and have strengthened capacity to cope with climate change risks	<p>2.1.1 Climate change resilient residential neighborhood reference framework is developed.</p> <p>2.1.2 Climate change awareness materials for different targets are developed.</p> <p>2.1.3 A technical and financial guide for implementing NbS at neighborhood level is developed.</p> <p>2.1.4 Workshops are organized for community groups and government officials on NbS implementation at neighborhood level.</p> <p>2.1.5 Training sessions are organized for community groups and government</p>	950,000

Project/Programme Components	Expected Outcomes	Expected Outputs	Amount (US\$)
		officials on NbS implementation at neighborhood level. 2.1.6 Field visits are organized for community groups and government officials on housing sector adaptation actions. 2.1.7 A strategic communication plan is developed.	
3. Monitoring, evaluation, and capitalization of experience in adaptation	3.1 Enhanced knowledge management and sharing of information for increased climate resilience in Morocco's neighborhoods	3.1.1 Climate change knowledge management database is created for the housing sector. 3.1.2 Project activities and results are captured and disseminated through appropriate information for the beneficiaries, partners and stakeholders and the public in general. 3.1.3 An Adaptation monitoring and evaluation system is developed.	750,000,
4. Total component			7,720,000
5. Project Execution cost -9.5%			733,400
6. Total Project Cost			8,453,400
7. Project Cycle Management Fee charged by the Implementing Entity 8.5% (if applicable)			718,539
Amount of Financing Requested			9,171,939

Projected Calendar:

Table 2: Main milestones for the project

Milestones	Expected Dates
Start of Project/Programme Implementation	January 2026
Mid-term Review (if planned)	July 2027
Project/Programme Closing	November 2028
Terminal Evaluation	December 2028

PART II: PROJECT / PROGRAMME JUSTIFICATION

A. Project/programme components

The three municipalities selected for this project are highly exposed to risks related to climate change. They are subject to several climatic hazards, such as floods, landslides, marine submersions, and forest fires. In particular, the building sector is one of the sectors highly exposed to climate change and is expected to face multiple impacts related to the gradual variability of climatic conditions (increased precipitation, rising temperatures, etc.). This sector is also confronted with extreme weather events and climate hazards that have become increasingly frequent and intense in recent years. These extremes and climatic hazards, such as, floods, heat waves, landslides, etc., have a significant impact and cause considerable damage to the construction sector. These municipalities also have socio-economic characteristics with low adaptive capacity, such as the number of households, the poverty rate and the population density.

Based on this observation, it becomes necessary to act at the level of these localities in order to protect them against the harmful effects of climatic hazards. To achieve the objective of the project, "Strengthening the resilience of the housing sector to climate change in the TTA Region", the project is based on a comprehensive and participatory approach combining capacity building of local actors, the use of nature-based solutions, ~~and~~ communication and awareness of local communities.

The actions proposed under this project have been designed to target the poorest and most vulnerable neighborhoods in one of the most vulnerable regions of Morocco to climate change. To achieve this, an interdependent set of soft and hard measures has been proposed to ensure sustainable resilience building at the household and community level. The soft measures focus on increasing community capacity and the capacity of officials and institutional systems at the sub-national level. All capacity building activities are designed to support, enhance and sustain the "hard" investments that will be made by the project. Such an approach is also consistent with Morocco's nationally determined contribution to "promote and enhance community adaptive capacity, including through community-based adaptation actions (...) and to "strengthen technical and institutional capacities (...) and integration of climate change into sectoral and sub-sectoral development plans". The heavy investments made by the project will concern all the infrastructure and ecosystems for protection and small-scale basic services. These investments have been fully identified and costed and have been subject to an initial environmental and social safeguard screening. They are presented briefly below. The specific needs of women, people with disabilities, and youth will be taken into account at all stages of the project. Extensive consultations were conducted during the formulation of the project proposal, with stakeholders and representative of the community (presidents of the three municipalities). More information and details are shown in [Part II compo](#), Section H and in Annex 1, while implementation will use, to the extent possible, the grassroots process, where community groups are trained and supported at all stages of the project and through which communities participate in project implementation and monitoring. At the community level, women will have a decisive interest in the implementation of the project. They will contribute equally to their work at the community level and will be encouraged to participate in physical labor. The project supports concrete adaptation and resilience actions throughout its three components by:

Component 1. Strengthening urban resilience to climate change in vulnerable neighborhoods in the TTA Region. In line with AF outcome 1, this component will focus on developing concrete actions to increase the resilience of the most vulnerable neighborhoods in the three municipalities selected for this project, through: 1.1.1 Area-based Urban analysis, identification and prioritization of residential neighborhoods ~~are realized~~, based on vulnerability diagnosis and risk assessment related to CC at municipal level. 1.1.2 Buildings resilience is reinforced in response to floods, landslides, in vulnerable neighborhoods in the three municipalities. 1.1.3 Integrated Nature based Solutions (NbS) to reduce run-off and adapt to increasing riverine floods and altered rain patterns are developed and implemented in the three ~~municipalities~~ targeted neighborhoods, in

collaboration with local stakeholders. 1.1.4 Integrated Nature based Solutions (NbS) to reinforce soil stability and reduce landslides ~~are~~ developed and implemented in the three ~~municipalities targeted neighborhoods~~, in collaboration with local stakeholders. These interventions will be implemented taking into consideration the main regulations that are related to climate change adaptation in the housing sector, such as the Seismic Construction Regulation RPS 2000 "2011 Version", the Seismic Regulation for Earth Construction "RPCT", the Thermal Regulation for Buildings in Morocco (RTCM). Vulnerability and climate risk assessment was conducted in the targeted region ~~at small scale~~ (regional scale) within the context of the development of the Habitat Climate Plan (MATNUHPV, 2016). The project will build on this assessment and zoom in on the 3 targeted municipalities to ~~identify choose~~ the most vulnerable neighborhoods. This will involve a detailed and comprehensive assessment to refine the findings at the provincial level to ensure that the project is tailored to the specific climate risks and vulnerabilities of each area, thereby enhancing the effectiveness of its implementation. The result of the vulnerability and climate risk, including the figures 1, 2, 3, was used during the consultancy process to raise awareness among stakeholders of the risks posed by climate change across the region. While the result of this assessment was of key importance, it is insufficient for the purpose and scale of the project (neighborhood scale). In this sense, ~~A-a~~ detailed and comprehensive assessment of vulnerability and risks related to climate change will be essential for this component and will identify the degree of vulnerability of the neighborhoods in the three selected municipalities. The prioritization of neighborhoods will be reassessed based on the results of this assessment. In other words, this component will allow local authorities, communities and households to identify the most vulnerable neighborhoods and infrastructures exposed to risks related to climate change, ~~as well as to prioritize adaptation actions to protect these areas~~. Based on the detailed and comprehensive assessment of vulnerability diagnosis and risks assessment related to climate change, the project will implement concrete actions to strengthen the resilience of the most vulnerable neighborhoods to climate change. This will be achieved through several activities, including the rehabilitation of existing vulnerable infrastructure and the adaptation of new buildings in targeted at-risk neighborhoods. Measures include strengthening foundations and structures to make them resilient to flooding and landslides, installing appropriate and efficient drainage systems, and using materials adapted to local climate risks. These interventions will be guided by national planning regulations and international climate adaptation standards, ensuring their compliance with safety and sustainability requirements. The specific activities to strengthen building resilience also include: Improving building waterproofing: Implementation of waterproofing solutions for roofs, walls and windows, to prevent water infiltration during periods of heavy rain. Waterproof membranes and water-resistant materials will be used. Strengthening drainage infrastructure: In addition to conventional drainage systems, innovative features such as water retention basins, rain gardens and green walls will be installed to improve runoff absorption and reduce the risk of flooding. Renovation of load-bearing structures: Work to strengthen the load-bearing elements of existing buildings, including load-bearing walls and foundations, to better withstand landslides and other extreme climatic hazards. Creation of rainwater management systems: Installation of rainwater harvesting devices such as cisterns and tanks to reduce pressure on drainage systems and provide an alternative water ~~source~~. Trainings ~~source~~. Training local craftsmen: Practical workshops will be organized to train local builders in climate-resilient construction techniques, encouraging the dissemination of best practices and the creation of solutions adapted to local contexts. Strengthening urban resilience to climate change in vulnerable residential neighborhoods will be achieved through the integration of nature-based solutions (NbS). Nature-based solutions (NbS) are ecosystem management approaches that aim to solve environmental problems, build resilience to climate change, and promote sustainable development by drawing on the characteristics and processes of nature. These solutions capitalize on the ecosystem services provided by nature to achieve specific objectives. Within this project, NbS will help to reduce run-off and adapt to increased river flooding and changing rainfall patterns. The development and implementation of these actions in the three municipalities will be carried out in close collaboration with local stakeholders.

In this context, integrated NbS to reduce run-off and adapt to increasing riverine floods and altered rain patterns activities cover the establishment of infrastructure combining green and gray solutions to manage river flooding and runoff in the district of the municipality of Tetouan. This includes the creation of **biological drainage channels** to channel rainwater, the development of **rain gardens to promote water infiltration** and filtration, and the installation of green infrastructure such as green roofs and absorbent green spaces. They also include the construction of river flood protection dikes. These initiatives aim to reduce the climate vulnerability of the targeted neighborhood by reducing the risk of flooding, improving water quality, and building community resilience to climate change. Expected results include a reduction in flood damage, an improvement in the quality of life of the residents of the targeted neighborhood and an increased awareness of the benefits of NbS.

Integrated NbS to reinforce soil stability and reduce landslide include the planting of plant species adapted to local conditions, with deep roots and fast growth, to stabilize vulnerable slopes, combined with the installation of rainwater harvesting systems in the two most vulnerable neighborhoods of the municipalities of Chefchaouen and Al Hoceima. They also include the construction of hedgerows to reduce soil erosion caused by runoff and promote water infiltration. Expected results include a reduction in the risk of erosion and landslides, improved resilience of targeted neighborhoods, and increased protection of downstream homes and infrastructure. These actions contribute to reducing climate vulnerabilities by ensuring sustainable land, and water management and adaptation of communities to the impacts of climate change.

The sustainability of these interventions is guaranteed by their alignment with strategies and plans already launched (e.g., the Nationally Determined Contribution, the National Strategic Adaptation Plan, the National Climate Plan, the Regional Climate Plan, the Climate Change Adaptation Plan for the Housing Sector, etc.) and housing programs (e.g., Cities Without Slums, program to address dangerous housing, urban upgrading programs, etc.). Thus, the proposed adaptation actions are integrated into ongoing and projected plans and programs related to adaptation and housing, both at the national and regional levels. Furthermore, the involvement of all stakeholders and the training and awareness-raising actions planned within this project will contribute to its sustainability in the region and nationwide.

In addition to that, to ensure the long-term sustainability of proposed adaptation measures, such as building resilience and integrating nature-based solutions (NbS), it is essential to promote strong local ownership and ongoing community engagement. This involves training communities, including women and vulnerable groups, to acquire the skills they need to maintain infrastructure. In addition, local risk management committees will be set up to monitor and maintain these infrastructures. Finally, regular monitoring will ensure the effectiveness and inclusiveness of the measures taken, by ensuring that all voices, especially those of women, are included in the governance and management of these adaptation projects.

Component 2. Awareness, communication, and capacity building

In line with AF outcomes 2 and 3, this component aims to raise awareness among local communities, as well as local and national authorities on the risks related to climate change in the housing sector and the necessary adaptation measures. It also focuses on communication and capacity building of the actors concerned with the project, through:

- 2.1.1 Climate change resilient residential neighborhood reference framework is developed.
- 2.1.2 Climate change awareness materials for different targets are developed.
- 2.1.3 A technical and financial guide for implementing NbS at neighborhood level is developed.
- 2.1.4 Workshops are organized for community groups and government officials on NbS implementation at neighborhood level: These workshops aim to raise awareness and mobilize community groups and government officials on the concepts and benefits of Nature-Based Solutions at the neighborhood level. They are interactive and participatory, allowing for teamwork and identifying challenges and opportunities for the implementation of NbS together. These workshops target a wider audience to generate engagement and understanding from all

stakeholders. The expected results include increased awareness and effective buy-in from all stakeholders.

- 2.1.5 Training sessions are organized for community groups and government officials on NbS implementation at neighborhood level. These training sessions focus on building the technical capacity of participants, providing them with knowledge, practical skills, and methodologies to effectively plan, implement, and evaluate NbS. They target more relevant key actors who will play an important role in the implementation of the different project activities. Expected results include enhanced expertise to ensure the effectiveness and sustainability of the NbS measures that will be implemented.
- 2.1.6 Field visits are organized for community groups and government officials on housing sector adaptation actions.
- 2.1.7 A strategic communication plan is developed.

The capacity building of national, regional and local actors will be achieved through the organization of workshops, field visits and training sessions, and by developing awareness materials for each of the target groups of actors (local communities, local and national authorities, the stakeholders involved in the project, in addition to the public, schoolchildren and NGOs).

Regarding the reference framework for the resilience of targeted neighborhoods, it consists of a set of guidelines, standards and best practices that will define the actions to be implemented to strengthen urban resilience in the face of climate change. This framework will include technical, environmental, social and economic aspects to ensure effective adaptation to climate risks specific to the concerned neighborhoods. The framework will be developed in consultation with the various stakeholders involved in the project.

Implementation of the framework will require adoption at the political level, notably by local authorities and national institutions, to ensure that the proposed measures are integrated into urban planning and climate risk management policies. This adoption will formalize the commitment of the concerned stakeholders to follow and apply the framework's recommendations in their urban planning and development projects. Finally, this framework could be used as a reference for the implementation of adaptation plans in other localities, thus contributing to the wider deployment of climate change resilience strategies.

The development of a technical and financial guide focused on the implementation of adaptation measures and the strengthening of the resilience of the housing sector, will allow the various actors to better target their investments and thus target priority actions for adaptation to climate change.

In addition, various types of workshops and capacity-building sessions will be organized under this component. These include Training of Trainers (ToT) programs after carefully selecting and equipping community leaders and trainers. Particular attention will be given to the inclusion of women, with priority selection mechanisms based on clearly defined criteria to ensure the meaningful participation of diverse and underrepresented groups.

The selection process will involve:

- Identifying target groups (e.g., neighborhood associations, women's groups, youth organizations);
- Defining transparent and inclusive selection criteria;
- Establishing mechanisms to manage community expectations and ensure alignment with project objectives.

These measures aim to promote ownership, equity, and sustainability in project design and implementation.

In addition to that, this component includes:

- Training of trainers workshops: these workshops are aimed at professionals, representatives

of regional departments and NGOs. The aim is to build their capacities and provide them with the support they need to deliver training courses on strengthening the climate change resilience of neighborhoods within their ~~organisations~~organizations;

- Workshops are organized for community groups and government officials on NbS implementation at neighborhood level: These workshops aim to raise awareness and mobilize community groups and government officials on the concepts and benefits of NbS at the neighborhood level. They are interactive and participatory, allowing for teamwork and identifying challenges and opportunities for the implementation of NbS together. These workshops target a wider audience to generate engagement and understanding from all stakeholders. The expected results include increased awareness and effective buy-in from all stakeholders.
- Training sessions are organized for community groups and government officials on NbS implementation at neighborhood level: The training sessions focus on building the technical capacity of participants, providing them with knowledge, practical skills, and methodologies to effectively plan, implement, and evaluate NbS. They target more relevant key actors who will play an important role in the execution of the different project activities. The expected results include enhanced expertise to ensure the effectiveness and sustainability of the NbS initiatives that will be implemented.

Communication is an essential element for disseminating information about the project and ensuring appropriation of the adaptation actions proposed for the resilience of communities to climate change and the strengthening of the capacities of actors. To this end, a strategic communication plan will be developed to facilitate the sensitization of local communities and local and national authorities on the risks related to climate change in the housing sector and the adaptation measures necessary for its resilience.

Component 3. Monitoring, evaluation, and capitalization of experience in adaptation

This component will ensure that the project is fully transparent, and all stakeholders are informed of the project's outputs and outcomes, as well as have access to replicable adaptation experiences, through:

- 3.1.1 Climate change knowledge management database is created for the housing sector.
- 3.1.2 Project activities and results are captured and disseminated through appropriate information for the beneficiaries, partners, stakeholders and the general public.
- 3.1.3 An adaptation monitoring and evaluation system is developed.

This database will include the following modules:

Module 1: A directory of resilient neighborhoods, which will compile technical data sheets on nature-based solutions implemented within the study framework.

Module 2: A repository of technical guides and awareness guides intended for public institutions, municipalities, NGOs, and schoolchildren. The technical guides will outline the different steps for implementing nature-based solutions, complementing the awareness guides primarily designed for the general public and schoolchildren.

Module 3: Illustrated guides on methods for assessing vulnerabilities and risks related to climate change.

Module 4: Climate data, including temperature, precipitation, wind, climate hazards, extreme events, key issues, ~~damages~~damages, and losses.

Module 5: Auxiliary data, encompassing all supplementary data collected as part of the study.

The proposed *climate change knowledge database for the housing sector* will be a centralized platform created, hosted and managed by the Regional Directorate of Housing. It will serve as a repository for information, data, and resources specifically focused on the intersection of climate

change and the housing sector, addressing both adaptation and mitigation aspects. This database will build upon and complement existing repositories by ensuring integration and alignment with relevant tools, resources and national and regional systems, including the SIREDD, which is currently being enhanced to function as a system for monitoring and evaluating climate change adaptation efforts. The database will act as a key component in bridging housing sector policies with national priorities, such as the country's Nationally Determined Contribution (NDC) and National Adaptation Strategy, by providing tailored and actionable insights for policymakers and stakeholders. The maintenance and ~~update~~updating of the platform will be supported through partnerships with relevant national and international organizations, alongside regular funding allocations. This database will ultimately serve as a dynamic tool for advancing climate-resilient housing policies and practices while supporting broader national climate objectives.

The monitoring and evaluation (M&E) system is an indispensable tool when it comes to implementing a climate change adaptation project. The main activities covered include:

- Setting up the M&E system: A monitoring and evaluation system will be designed with SMARTIE indicators to measure the project's progress and impacts. Reliable data collection mechanisms will be put in place to guarantee the quality of information;
- Capitalizing on experience: Lessons learned from actions will be documented to improve adaptation measures. A sector-specific knowledge base will gather best-practices and innovative tools for dissemination.
- Stakeholder engagement: Coordination between national, regional, and local levels will be strengthened, with a clear division of responsibilities and effective mobilization of resources.
- Dissemination of results: Modalities for sharing data and analyses will be developed to inform decision-makers, technicians, and local communities, promoting transparency and the use of results.

Monitoring will be done through indicators to measure the progress of the project. These indicators must be SMARTIE (Specific, Measurable, Acceptable, Realistic, Timely, IT-Ready, and Equity-informed) and therefore carefully chosen. They may be intended to assess the impacts on the vulnerability of the housing sector, as well as social or economic indicators to ensure a consistent monitoring system that will make it possible to assess the efficiency of the project as a whole, while ensuring a management mode that promotes continuous improvement and the achievement of the co-benefits of sustainable development (economic, social, and environmental). The M&E system will be implemented by designated individuals, along with an identification of the procedure for obtaining data to ensure their reliability and quality, as well as the definition of the modalities for disseminating the data to the relevant actors once processed.

The development of this monitoring and evaluation system will be preceded by the creation of a knowledge management database on climate change for the housing sector. In addition, this component will focus on capitalizing on experiences in adapting the housing sector to climate change. The lessons learnt from these different experiences will be used to formulate recommendations for the effective implementation of adaptation actions.

The tools and methodologies used by this project can be replicated and scaled up in other regions of Morocco as follows:

- **Strengthening urban resilience:**
 - The employed vulnerability diagnosis and risk assessment methodologies can be replicated to identify and prioritize neighborhoods in other regions facing similar risks;
 - The NbS implemented to reduce runoff, adapt to fluvial flooding and enhance soil stability provide adaptable models for other municipalities, with measures tailored to local contexts.
- **Capacity building and stakeholder engagement:**
 - The development of a reference framework for climate-resilient residential neighborhoods and technical guides creates standardized tools for regional adaptation planning;

- Training sessions, workshops and field visits build the capacity of community groups and government officials, enabling them to replicate best practices in other regions of Morocco;
 - Strategic communication and awareness-raising campaigns improve understanding of climate adaptation issues. They provide transferable tools and approaches to promote climate adaptation in other regions, facilitating the implementation of proposed solutions on a national scale.
- **Knowledge management and dissemination of results:**
- A centralized database on climate change for the housing sector consolidates lessons learned, making data and tools accessible for wider application;
 - Documentation and dissemination of project activities and results enable other regions to build on proven approaches and adapt them to their specific contexts;
 - The adaptation monitoring and evaluation system provides a framework for measuring progress and enabling other regions to evaluate and refine their initiatives effectively.

B. Economic, social and environmental benefits

In order to address climate change risks in the target areas, this project aims to make the most vulnerable groups, including women and youth, more resilient and potentially avoid the negative environmental and socio-economic impacts of climate change. During the development and implementation of the project, a participatory approach will be adopted to identify specific needs and possible concerns related to the proposed interventions. Participatory assessment, planning and decision-making processes to be adopted during project preparation and implementation would help to avoid/mitigate potential negative impacts.

Quantifiable benefits could include the number of neighborhoods safeguarded, reduction in flood-prone areas, jobs created through project activities, and increased community awareness as measured through workshops and training participation. The table below details more benefits.

Table 3: Economic, Social, and Environmental benefits

Type of benefits	Baseline	With/after project
Economic	<ul style="list-style-type: none"> • Regular floods and landslides result in livelihood and economic and household losses and damages to community infrastructure and livelihood options • Lack of basic and resilient infrastructure. Additionally, inhabitants have limited livelihood options. 	<ul style="list-style-type: none"> • Number of buildings, including those owned and/or inhabited by urban poor, vulnerable to the impacts of climate change-induced floods and landslides is reduced because of building reinforcement activities planned under output 1.1.2. • Job opportunities targeting the local communities, including vulnerable groups and urban poor, are availed as a result of the project activities under outputs 1.1.2, 1.1.3, and 1.1.4. • Quality of life and access to basic services and shelter is improved as a result of the rehabilitation of existing vulnerable infrastructure and the adaptation of new buildings in the targeted at-risk neighborhoods. This can be measured by quantifying the number of buildings rehabilitated/ built with appropriate adaptive measures and the number of beneficiaries of such activities, as well as the number of buildings benefiting from the rehabilitated/reinforced infrastructure. • Economic co-benefits are achieved through the implementation of integrated NbS aimed at the reduction of run-off and adaptation to increasing riverine floods and altered rain patterns and the reinforcement of soil stability and reduction of landslides (Outputs 1.1.3 and 1.1.4); for instance, number of green roofs, absorbent green spaces, raingardens, hedgerows that enhance the aesthetics of the target neighborhoods and improve

		<p>water and air quality.</p> <ul style="list-style-type: none"> Disaster recovery costs for residents and municipalities are reduced as a result of the implementation of outputs 1.1.2, 1.1.3, and 1.1.4
Social	<ul style="list-style-type: none"> Limited studies at the neighborhood levels make informed decision-making and adaptive measures less likely. Lack of awareness about climate-related risks (e.g. floods, landslides) among the local community and limited knowledge on resilient construction methods among local actors result in limited autonomous adaptation measures. Extreme weather events and climate change impacts such as floods, and landslides can increasingly be considered as co-drivers of poverty and compound social problems such as disease, sanitation, food security issues, community safety issues etc Damage to infrastructure and property because of flooding has a disproportionate impact on the most vulnerable communities. 	<ul style="list-style-type: none"> The most vulnerable neighborhoods and infrastructures are identified based on a detailed vulnerability diagnosis and risk assessment at the neighborhood scale. (Based on output 1.1.1). Needs of and challenges faced by vulnerable and marginalized groups including women, children, people with disabilities, youth, the elderly, and urban poor are included and reflected in the project components based on the activities under output 1.1.1. A planning approach sensitive to marginalized and vulnerable groups, indigenous peoples and gender will ensure equal access to resilient infrastructure. Local authorities, communities, and households' capacities are raised such that they are to be able to identify the most vulnerable neighborhoods and infrastructures exposed to risks related to climate change, as well as to prioritize adaptation actions to protect these areas. (Based on output 1.1.1 and the outputs of component 2). Local craftsmen are trained in climate-resilient construction techniques, enhancing their livelihoods and building their capacities. (Based on the activities proposed under output 1.1.2). Local authorities and local communities are more aware of- the risks and impacts of climate change. (Based on outputs 1.1.1, 2.1.2, 2.1.7). Local authorities and local communities have stronger knowledge of resilient infrastructure construction and maintenance techniques and are better equipped to undertake autonomous adaptation actions. (Based on outputs 2.2.1, 2.1.3, 2.1.4, 2.1.5, 2.1.6). National, regional, and local actors are better equipped with knowledge and skills on climate adaptation in the housing sector. (Based on outputs 2.1.1, 2.1.2, and 2.1.3) - The climate change resilient residential neighborhood reference framework framework and technical and financial guide for implementing NbS at neighborhood level shall serve as valuable knowledge products that will help inform local authorities and national institutions. They shall also encourage the integration of the proposed measures into urban planning and climate risk management policies and projects and the allocation of investments and resources towards the upscaling and replication of such measures.
Environmental	<ul style="list-style-type: none"> Rapid urban development increasingly leads to environmental degradation, land losses, increased waste production and energy use. Coupled with climate-change-induced floods and extreme weather events, this leads to environmental losses and exacerbated effects of flooding and landslides. Extreme weather events and 	<ul style="list-style-type: none"> Construction waste and debris are reduced as a result of the implementation of adaptation measures. This shall<u>should</u> protect the environment by reducing contaminants and the amount of unrecyclable waste that goes to the landfills after each extreme weather event. This is in line with outputs 1.1.2, 1.1.3, and 1.1.4 Groundwater is replenished and natural cycles are restored as a result of the implementation of integrated NbS that allow the infiltration of rainwater. (Output 1.1.3) Soil erosion is reduced as a result of the integrated NbS aimed at soil stabilization and reduction of landslides. (Output 1.1.4)

	<p>landslides cause soil erosion and land degradation.</p>	<ul style="list-style-type: none"> • Environmental degradation and losses resulting from the impacts of climate change are reduced as a result of informed and improved planning and preparedness for disasters. (Outputs 1.1.1, 2.1.2, 2.1.3, 2.1.6) • NbS and ecosystem-based adaptation in the urban environment are promoted, as stakeholders become more informed on these approaches. (Outputs 2.1.1, 2.1.3, 2.1.4, 2.1.5, 2.1.7) • Biodiversity is enhanced as a result of planting species adapted to local conditions, promoting natural cycles and attracting native fauna. (Outputs 1.1.3 and 1.1.4) • An alternative water source is provided through the use of rainwater harvesting systems as an alternative water source, also reducing pressure on the drainage systems. This can be measured by calculating the anticipated amounts of rain to be collected and diverted away from drainage infrastructure per year. (Output 1.1.2)
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-Social Benefits and Gender Considerations

The project targets the most vulnerable neighborhoods in a region highly susceptible to the impacts of climate change. Throughout the project’s development and implementation, the needs of the local community, including marginalized and vulnerable groups, shall be sought after and considered. Through an in-depth urban analysis, vulnerability and risk assessments at the neighborhood scale (output 1.1.1), the project shall ensure the identification and prioritization of residential neighborhoods most at risk of climate change impacts, also mostly inhabited by marginalized groups., This comprehensive vulnerability diagnosis and risk assessment shall ensure the project promotes inclusivity and equity by prioritizing vulnerable neighborhoods and ensuring that women, marginalized groups, and low-income communities benefit from safer living conditions and enhanced adaptive capacities.

By implementing a combination of risk and vulnerability reduction measures aimed at local institutions, communities, and assets, particularly in vulnerable and poor urban areas, this project is expected to reduce climate-related economic, household, and livelihood losses, reduce the vulnerability of women, indigenous people, people with disabilities, and youth, and reduce environmental degradation.

The project shall follow a participatory approach, involving national, regional, and local authorities, local communities, and local craftsmen and construction workers. The involvement of the local community, and particularly vulnerable groups, throughout the project shall grant these stakeholders the opportunity to directly influence project activities and outcomes, thereby ensuring they reap direct benefits from the project. The proposed actions aim to reduce the impacts of floods and landslides on the local community and public and private assets, as well as strengthening the adaptive capacities of the beneficiaries and the target neighborhoods. Besides the hard interventions, the project also contains capacity building and awareness raising activities for the purpose of introducing new knowledge and stimulating behavior change. Component 2 of the project is designed to cater to different segments of the beneficiaries, with awareness raising and capacity building activities tailored to their profiles and needs, as is discussed in the description of the component’s activities in Section A above.

Female population in the targeted municipalities is as follows: the female population represents 48.3% of the total population in Chefchaouen province, 49.8% in Tétouan province and 50.1% in Al Hoceima province. The female population in these provinces is particularly vulnerable to the risks associated with flooding, such as material damage and the economic losses it entails as well as health risks and the threat of loss of life. Their vulnerability is particularly attributable to their unemployment, which limits their ability to cope with the impacts of climate change and recover from the effects of extreme weather events. In addition, their limited access to economic resources

and training opportunities exacerbates their vulnerability to climate risks.

Women's specific needs in the targeted municipalities include access to training to improve their employability, appropriate financing to undertake income-generating activities, and climate-resilient infrastructure to protect their livelihoods and households. However, the major challenges facing women include their under-representation in decision-making bodies, their limited access to land and financial resources, and restrictive socio-cultural norms.

To promote gender equality and inclusion, particular attention will be given to the inclusion of women through priority selection mechanisms based on transparent and clearly defined criteria, ensuring the meaningful participation of diverse and underrepresented groups. The selection process will involve identifying specific target groups such as neighborhood associations, women's groups, and youth organizations; establishing inclusive criteria to guide participation; and implementing mechanisms to manage community expectations while maintaining alignment with the project's overall objectives.

In response to the above-mentioned needs and challenges, the following recommendations shall be taken into consideration during the design and planning of the project activities:

- Implement targeted training to improve women's skills in climate-resilient economic sectors, such as green entrepreneurship or adaptive technologies.
- Strengthen women's participation in decision-making processes through quotas or inclusive participatory mechanisms.
- Develop gender-sensitive policies that take into account the specific needs of men and women in natural resource management, infrastructure and disaster response.
- Sensitize communities to the importance of gender equality, integrating men as allies in initiatives to strengthen inclusion.
- Monitor and evaluate the impact of projects using gender-sensitive indicators to ensure that they reduce existing gaps and do not create new inequalities.

Furthermore, the project is committed to promoting gender equality and women's empowerment as a core principle. Measures are in place to assess and manage potential risks related to gender dynamics, ensuring that the project complies with the AF's policies and safeguards. Through a monitoring and evaluation plan that reflects this commitment and through the inclusion of women in the job opportunities availed through the integrated NbS implementation and upkeep and the capacity-building activities.

Additionally, the project complies with the Gender Policy of the Adaptation Fund (AF) through the following points:

1. Gender-sensitive consultations: A participatory workshop was held to identify adaptation priorities and needs, taking into account specific gender-related vulnerabilities. Consultations were held with governments, NGOs, local communities and vulnerable groups, to integrate gender perspectives into the project.

2. Capacity building: The project includes actions to strengthen the capacities of national and sub-national actors to respond to climate risks, with monitoring of strengthened capacities, including by gender (number of men and women trained).

3. Social benefits of the project: The baseline situation indicates that flood damage disproportionately affects the most vulnerable communities. With the project, a planning approach sensitive to marginalized and vulnerable groups, indigenous peoples and gender considerations will ensure equal access to resilient infrastructure, helping to reduce inequalities and strengthen the resilience of vulnerable communities.

4. Environmental and social principles: The project must guarantee gender equality and women's empowerment, ensuring that appropriate measures are put in place to assess and manage

potential impacts in this area.

Changing gender dynamics, in particular by empowering women and ensuring their equal participation in decision-making processes, can bring about lasting change in climate change adaptation. By promoting the inclusion of women in the planning and management of resilient infrastructure, the project contributes to improving community resilience. The active participation of women in adaptation-related activities means that the specific needs of different groups can be better addressed, enhancing the impact and sustainability of proposed solutions. This approach also promotes equal economic and social opportunities, creating a virtuous circle of sustainable development and gender equality.

Socially, the project will promote inclusivity and equity by prioritizing vulnerable neighborhoods based on a comprehensive vulnerability diagnosis and risk assessment, ensuring that women, marginalized groups, and low-income communities benefit from safer living conditions and enhanced adaptive capacities.

-Environmental Benefits

The project will mitigate the impacts of climate change by reducing runoff, stabilizing soil, and adapting to altered rainfall patterns through integrated NbS, contributing to ecological balance and biodiversity conservation. Besides the points mentioned in the table above, the adoption of local materials shall reduce the emissions associated with the project activities. Additionally, the use of local plants and plants adapted to the selected sites' conditions shall help in the stabilization of the soil and restoration of the natural rhythms and cycles in the site. Furthermore, the introduction of the integrated NbS such as rain gardens and green open areas shall contribute to enhanced public health.

At the fully developed proposal stage, the project will address potential risks that could hinder equitable benefit distribution. Key risks include limited access to resources or decision-making processes for marginalized groups, unequal distribution of NbS benefits, and insufficient local capacities to sustain interventions. The project ensures the meaningful integration of women and vulnerable groups through a participatory and inclusive approach at all stages of planning and implementation. Community consultations and workshops will actively involve these groups in identifying priorities and designing interventions, ensuring their voices are heard. Gender-sensitive training sessions, field visits, and awareness campaigns will empower participants with knowledge and skills while addressing accessibility needs, such as flexible schedules and supportive services like childcare. The project will also create employment and leadership opportunities for women and marginalized groups in implementing Nature-based Solutions (NbS).

Benefits include safer living conditions in vulnerable neighborhoods, enhanced adaptive capacities, and economic empowerment through targeted initiatives. Gender-sensitive indicators, such as participation rates, job creation, leadership roles, and improved safety and resilience perceptions, will monitor and ensure equitable inclusion. To ensure project activities ~~does not~~ disproportionately impact vulnerable groups, the project will adopt several safeguards, as detailed in the paragraph below.

-Activities will offer flexible participation options, such as sessions scheduled during non-working hours or near participants' communities, to accommodate diverse needs. Non-monetary incentives like skills training, certification, and public recognition will be provided to encourage engagement while fostering long-term benefits. Tailored capacity-building opportunities will empower marginalized groups, including women and persons with disabilities, to contribute meaningfully. Participation will remain entirely voluntary, with mechanisms to address concerns promptly. A robust monitoring system will assess the socioeconomic impacts, including income generation and time allocation, ensuring contributions are equitable and do not negatively affect livelihoods or adaptive capacities. These measures aim to foster inclusive and sustainable community engagement and mitigate risks that may hinder the equitable access to project

benefits.

C. Describe or provide an analysis of the cost-effectiveness of the proposed project/programme.

Detailed costs per action / project activity will be provided during the full proposal phase, including cost effectiveness (cost per person). This can only be done once the project interventions are fully identified. The cost-effectiveness rational of possible project interventions is discussed in the table 4 below.

Table 4 Proposed adaptation actions' cost-effectiveness rationale

Proposed adaptation actions / outputs	Alternative actions and rationale why priority actions have been selected from a cost-effectiveness perspective
<p>1.1 Strengthened urban resilience in vulnerable residential neighborhoods</p> <p>1.1.1 Urban analysis, identification and prioritization of residential neighborhoods are realized, basing on vulnerability diagnosis and risk assessment related to CC at municipal level.</p> <p>1.1.2 Buildings resilience is reinforced in response to flood, landslides, in vulnerable neighborhoods in the three municipalities.</p> <p>1.1.3 Integrated Nature based Solutions (NbS) to reduce run-off and adapt to increasing riverine floods and altered rain patterns are developed and implemented in the three municipalities, in collaboration with local stakeholders.</p> <p>1.1.4 Integrated Nature based Solutions (NbS) to reinforce soil stability and reduce landslide are developed and implemented in the three municipalities, in collaboration with local stakeholders.</p>	<p>Component 1</p> <p>Through the implementation of interventions aimed at reinforcing buildings' resilience and integrated NbS aimed at reducing run-off and floods and enhancing communities' resilience, stabilizing soil and reducing incidents of landslides, the project shall reduce the anticipated costs of recovery and rehabilitation of buildings and infrastructure that may be damaged due to incidents of floods, landslides, and extreme weather events. Additionally, the project aims to identify the most vulnerable neighbourhoods and marginalized groups such as urban poor and women and propose concrete and effective measures to reduce the impacts of climate hazards. The interventions proposed in this project will help reduce these anticipated costs, and relieve the most vulnerable beneficiaries of their burden.</p> <p>Alternatively, the identified climate hazards, floods and landslides, will cause economic losses in the form of destruction of infrastructure and buildings, besides the loss of livelihoods and potential loss of life. A no action (business as usual) scenario will result in progressively higher costs over time on account of damages and losses resulting from flood and landslides events. These costs, including health and recovery-related costs, will be severely impactful in particular on vulnerable groups, such as urban poor and inhabitants of informal urban settlements.</p> <p>Sub-component 1.1.2:</p> <p>The measures that will be implemented to strengthen the resilience of buildings to the risks of flooding and landslides include interventions such as the rehabilitation of existing infrastructure, the adaptation of new buildings and the installation of adapted drainage systems. These measures involve upfront costs related to the acquisition of construction and maintenance materials and labour. However, they can significantly reduce future financial losses due to natural disasters and improve the safety of</p>

residents in targeted neighbourhoods. Although the initial costs can be high, these interventions offer significant profitability through the reduction of future losses. Their effectiveness will also be enhanced through compliance with existing housing and development regulations and strict compliance with building standards in the targeted neighbourhoods.

Additionally, the minimization of recovery costs helps enhance the quality of life and allows local authorities and local communities to direct the limited resources elsewhere, where investment is needed, contributing to the overall improvement of condition and enhancing their resilience.

Sub-component 1.1.3

Nature-based solutions aimed at reducing runoff and adapting to increased river flooding, such as rain gardens, biological drainage swales, green roofs, and protective dikes, have lower upfront costs compared to purely gray solutions. However, these solutions require the costs of acquiring materials and regular maintenance. In return, they offer multiple benefits, including reduced urban flooding and related losses, better rainwater management, and other environmental benefits that justify its efficiency and cost-effectiveness. The involvement of the local authorities and communities throughout the project's development and implementation, and specifically in the outputs of Component 2, shall also ensure ownership and proper maintenance of the planned interventions. This shall ensure the upkeeping of the solutions and cost-effectiveness and long-term sustainability.

Sub-component 1.1.4

The planting of plant species adapted to local conditions, the implementation of water harvesting systems, as well as the installation of hedgerows are economic and sustainable options. They help stabilize vulnerable soils and slopes, reduce erosion and contribute to sustainable water management. In addition, although the initial cost is significant, the long-term impact helps prevent landslides and protect infrastructure and communities. Thus, these interventions will avoid the future costs of the impacts of landslides in the targeted neighbourhoods.

Additionally, Cost-effectiveness through community contributions

The project will be implemented in close collaboration with local communities and government institutions. This partnership model will result in significant cost savings as communities and local partners will provide significant in-

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	<p>kind support. For example, communities will provide in-kind contributions by participating in infrastructure development. In addition, the community could benefit from capacity building and the recruitment of semi-skilled and skilled workers. On the side of the local communities, in-kind participation translates into direct involvement in the work and the organization of community groups for the maintenance of the infrastructure. Additionally, cheaper local labour helps reduce project costs.</p> <p>For government institutions, in-kind contributions include technical support (studies, supervision of works), the provision of seedlings, or the necessary tools, as well as the implementation of training to strengthen local capacities. Additionally, a reduction in taxes for the work financially supports the implementation of the project. As such, these combined contributions not only reduce costs, but also build local commitment and capacity while ensuring community and government support critical to the success of the project.</p>
<p>2.1 Stakeholders are fully informed and have strengthened capacity to cope with climate change risks</p> <p>2.1.1 Climate change resilient residential neighborhood reference framework is developed.</p> <p>2.1.2 Climate change awareness materials for different targets are developed.</p> <p>2.1.3 A technical and financial guide for implementing NbS at neighborhood level is developed.</p> <p>2.1.4 Workshops are organized for community groups and government officials on NbS implementation at neighborhood level.</p> <p>2.1.5 Training sessions are organized for community groups and government officials on NbS implementation at neighborhood level.</p> <p>2.1.6 Field visits are organized for community groups and government officials on housing sector adaptation</p>	<p>Awareness raising and capacity building activities are required to ensure the informed decision-making and action in order to cope with the identified climate change risks. The inclusion of the most vulnerable and marginalized groups including women, children, people with disabilities, youth, the elderly, and urban poor ensures their needs are properly met and encourages project ownership. This ensures the project's cost-effectiveness in responding to the needs of the stakeholders and supports its long-term sustainability.</p> <p>Skill building of beneficiaries and community leaders to operate, maintain and replicate interventions is required to sustain them.</p> <p>Proper dissemination of knowledge strengthens local authorities, communities, and households' capabilities in responding to the climate risks beyond the project's activities and shall pave the way for future interventions by the local actors in this regard.</p> <p>Training local craftsmen in climate-resilient construction techniques, enhances their livelihoods and builds their capacities, while simultaneously reducing project's labour costs. Furthermore, it paves the way for such techniques to be embedded in the construction practices of the targeted areas.</p> <p>The activities under Component 2 ensure that local authorities and local communities have stronger knowledge of resilient infrastructure construction and maintenance techniques and are better equipped to</p>

<p>actions.</p> <p>2.1.7 A strategic communication plan is developed.</p>	<p>undertake autonomous adaptation actions. The financial guide will help local actors better direct investments and resources towards the upscaling and replication of such adaptive measures.</p> <p>Alternatively, local authorities and communities are left to grapple with the impacts of the identified risks on an ad-hoc basis, depending on the available resources at the time of an incident of floods and/or landslides.</p>
<p>3.1 Enhanced knowledge management and sharing of information for increased climate resilience in Morocco's neighborhoods</p> <p>3.1.1 Climate change knowledge management database is created for the housing sector.</p> <p>3.1.2 Project activities and results are captured and disseminated through appropriate information for the beneficiaries, partners and stakeholders and the public in general.</p> <p>3.1.3 An Adaptation monitoring and evaluation system is developed.</p>	<p>Capturing information through a proper monitoring and evaluation plan during implementation and the involvement of all identified stakeholders throughout the project's development and implementation shall enhance the resilience of the local actors and encourage the replication and upscaling of the project's impacts. The activities planned under this component not only serve to promote its long-term sustainability through keeping everyone involved informed but also enhance the overall resilience of the targeted neighborhoods and encourages future actions towards climate adaptation.</p> <p>Alternatively, the local actors are less informed on climate resilience, specifically in the area of buildings and neighborhoods' adaptation to the climate-induced risks of floods and landslides. As a result, the local actors remain improperly equipped to respond to these risks and plan accordingly.</p>

Overall, the project aims to be cost-effective through: avoiding anticipated costs of climate change impacts; efficient project operations; community involvement/contribution ensuring sustainability of interventions; and selecting technical options to be implemented based on a criteria that considers nature-based solutions' appropriateness, cost, feasibility and resilience/sustainability.

Cost-effective and Efficient project operations

UN-Habitat works in a very efficient way to make the project operations cost-effective. Indeed, it conducts technical assistance, capacity building, and design primarily internally; in other words, UN-Habitat eliminates intermediaries (e.g., consulting firms) and works directly with local government partners (thereby building their capacity while reducing costs). In addition, its strategy strongly involves the community, thus significantly reducing costs. This is relevant to all components of the project.

D. Describe how the project/programme is consistent with national or sub-national sustainable development strategies, including, where appropriate, national adaptation plan (NAP), national or sub-national development plans, poverty reduction strategies, national communications, or national adaptation programs of action, or other relevant instruments, where they exist.

This project aligns with several commitments taken by Morocco for the fight against climate change in the housing sector, namely:

1. Commitments taken by Morocco for the housing sector in the framework of the NSSD

The housing sector is one of the sectors targeted by the National Strategy on Sustainable Development (NSSD) in the framework of its strategic axis 11, which encourages the integration

of sustainability in urban development strategies in order to ensure social cohesion, urban planning and pollution control as well as the implementation of ecological construction practices for new buildings and for the renovation or rehabilitation of existing buildings. This involves constructing buildings that optimize non-renewable resources and improve their energy and environmental performance throughout their life cycle by favoring a more economical use of resources, particularly in terms of energy consumption, water and waste production. The project contributes directly to the implementation of Strategic Axis 11 by promoting energy-efficient, climate-resilient housing solutions in vulnerable urban neighborhoods. It supports the national objective of enhancing urban sustainability while addressing the environmental and socio-economic vulnerabilities of marginalized communities.

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2. Commitments taken for the housing sector in the framework of the Sustainable Development Goals (SDGs)

In terms of delivering on the Paris Agreement in conjunction with SDG 13 and with a focus on the housing section, Morocco commits to: build resilience and adaptive capacity to climate-related hazards and natural disasters; incorporate climate change measures into national policies, strategies and planning, including urban planning; improve education, awareness, and individual and institutional capacity for climate change adaptation, mitigation, and impact reduction, and early warning systems. The project operationalizes SDG 13 at the local level by integrating climate adaptation into urban development and housing interventions. Through capacity building and awareness efforts, it advances Morocco's commitment to enhancing community-level resilience.

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3. Commitments taken by Morocco for the housing sector in the framework of the National Adaptation Plan (NAP)

The housing sector in Morocco is called upon to face its vulnerability, to strengthen its resilience and its adaptive capacity to the impacts of climate change. One of the particularities of adaptation in the building sector lies in the fact that the measures taken to adapt are often valid for mitigating GHG emissions (e.g., building insulation to reduce energy demand and GHG emissions while also mitigating the impacts of heat or cold waves). In order to strengthen adaptation to climate change in the housing sector, the NAP includes a number of measures, divided into the following areas: A1: Strengthen the consideration of climate change in the housing sector. A2: Develop a better resilience of "urban areas at risk" to climate hazards. The project directly addresses NAP priorities by targeting urban areas at risk and implementing nature-based and infrastructure solutions to enhance housing resilience. It also promotes co-benefits between mitigation and adaptation through sustainable construction techniques and climate-sensitive planning.

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4. Commitments taken by Morocco for the housing sector in the framework of NDC

Morocco's NDC was updated through a participatory approach. Before COP22 in 2016, Morocco has committed to reduce its GHG emissions by 42% by 2030, with an unconditional target of 17%. The new updated NDC includes a GHG reduction target of 45.5% of which 18% is unconditional. The updated NDC contains 67 projects focused on seven sectors, including the land use and housing sector. The project supports Morocco's NDC implementation by contributing to both mitigation (energy efficiency, urban cooling) and adaptation (flood and heat risk reduction) in the housing sector. It responds to the national call for transformative action in urban environments to reduce GHG emissions while enhancing climate resilience.

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5. Commitments taken by Morocco for the housing sector in the Sendai framework

The Sendai Framework for Disaster Risk Reduction includes several actions that concern the housing and building sector. Therefore, the fourth priority, related to strengthening disaster preparedness to respond efficiently and to " build back better " during the recovery, rehabilitation, and reconstruction phase, also addresses disaster risk reduction measures that the housing sector engages in, namely: promote the integration of risk reduction measures into post-disaster recovery and rehabilitation programs; better link the activities of rescue, rehabilitation and development; take advantage of opportunities during the recovery phase to build capacity to reduce disaster risk in the short, medium and long term, namely including measures for land-use planning,

improvement of structural standards and exchange of technical expertise, knowledge and data from post-disaster assessments and experience; and to integrate post-disaster reconstruction into the sustainable economic and social development of affected areas. This should also apply to temporary facilities that welcome people displaced by a disaster and .sp Provide guidance on post-disaster reconstruction preparedness, namely including land-use planning programs and improvement of structural standards, inspired by the recovery and rebuilding programs carried out in the decade following the adoption of the Hyogo Framework of Action, and sharing of experiences, knowledge and lessons learned. The project embodies the “build back better” principle by prioritizing disaster-resilient urban infrastructure and climate-proof housing solutions. It enhances disaster preparedness by integrating risk reduction into planning and reconstruction of vulnerable neighborhoods.

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6. Morocco's commitments as a member of the Global Alliance for Building and Construction (GABC)

The MATNUHPV is a member of the GABC launched in December 2015 during the COP21 and supported by the United Nations Environment Program (UNEP). Indeed, the GABC aims to promote the emergence of a low-carbon and climate change resilient building sector through the sharing of experiences and strengthening cooperation between the different actors of the construction sector at the global level. The project aligns with GABC's goals by fostering local innovation and international best practices in green building and climate-resilient construction. It contributes to Morocco's leadership role within the Alliance by piloting scalable, climate-smart housing models.

7. Commitments taken by Morocco for the housing sector within the framework of the National Plan to Combat Global Warming

The housing sector is one of the sectors targeted by the National Plan to Combat Global Warming, both for the mitigation and adaptation components. In terms of adaptation, the Ministry of National Territory and Urban Planning, Housing and City Policy (MATNUHPV) adopts a bottom-up territorial approach based on the participation, awareness and training of actors. Several adaptation actions are carried out by considering sustainable development as a vector of social and spatial solidarity, in a concerted manner with several other Ministries, among the most relevant actions are:

- Accelerating the national program "cities without slums" to improve the housing conditions of the populations concerned, to face the increasing frequency of floods,
- Implementing rehousing programs for populations whose homes are located in sites at major risk and threatened by flooding,
- Implementing a rehabilitation program for ksours, kasbahs and medinas threatened by the intensity of the rain, Draft law on the urban planning code integrating sustainability,
- protection of natural areas and flood risk prevention in the master plans of agglomerations and in the municipal development plans,
- Development of rainwater harvesting systems, and on-site wastewater treatment and reuse systems in new cities.
- The project implements key actions from the Plan, including upgrading precarious housing and enhancing flood resilience through participatory, community-based approaches. It advances territorial equity and social inclusion by prioritizing the most vulnerable urban populations in climate adaptation efforts.

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8. Alignment with the TTA region's climate change adaptation plan for the housing sector and the region's territorial climate plan

The project's first component relating to "Strengthening urban resilience to climate change in vulnerable residential neighborhoods" is aligned with strategic axis 2 "Promoting the resilience of housing and populations to climate change" of the Habitat Climate Plan and operational objective 2.3 "Strengthening the consideration of climate change in the housing and urban policy

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sector” of strategic objective 2 “Assessing, preventing and reducing climate vulnerabilities and risks” of the Territorial Climate Plan. Similarly, component 2 focusing on awareness, communication, and capacity building is aligned with strategic axis 3 “Strengthen the capacities of players: Education, training, communication and awareness” of the housing climate plan. The project offers a concrete implementation framework for the region’s housing adaptation and territorial climate strategies. It strengthens multi-level coordination between regional and national climate objectives through targeted local interventions.

Describe how the project/programme meets relevant national technical standards, where applicable, such as standards for environmental assessment, building codes, etc., and complies with the Environmental and Social Policy of the Adaptation Fund.

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Table 5 Main regulations developed by the ministry related to climate change adaptation in the housing sector

Regulation	Description	How the project will address the requirements of these national standards
Seismic Construction Regulation (RPS 2000 "2011 Version")	Establishes design and calculation rules to enhance building resistance to seismic activity, including civil engineering and architectural provisions.	<u>The project will ensure that all new constructions and rehabilitations comply with the seismic design criteria set by RPS 2000. Structural designs will integrate reinforced construction techniques and appropriate materials to enhance resistance to seismic activity. Local engineers and construction firms will be trained and monitored to apply these standards in both civil engineering and architectural components.</u>
Seismic Regulation for Earth Construction (RPCT)	Defines parameters and technical requirements to improve seismic performance of earth-based constructions.	<u>For any interventions involving traditional or earth-based buildings, the project will apply RPCT guidelines to strengthen seismic performance. The project will support retrofitting techniques that preserve traditional architecture while improving safety and resilience. Technical assistance will be provided to ensure that retrofits use appropriate seismic reinforcement methods.</u>
Thermal Regulation for Buildings in Morocco (RTCM)	Sets performance standards for building envelopes based on climate zones. Defines minimum energy efficiency requirements for HVAC systems to improve thermal comfort.	<u>The project will incorporate RTCM standards in building envelope designs, ensuring adequate insulation and ventilation adapted to local climate zones. Energy-efficient HVAC systems will be promoted, especially in public or multi-unit buildings, to enhance thermal comfort and reduce energy demand. Climate-responsive design principles will be integrated into architectural planning.</u>
Technical Standardization Committees	Over 300 standards adopted for sustainability and energy efficiency in: thermal/acoustic insulation, building performance, waterproofing, sustainable construction, urban development, and heritage restoration.	<u>The project will align with relevant national standards covering insulation, energy efficiency, waterproofing, and sustainable construction. Procurement specifications will require materials and methods certified by these standards. Technical capacity-building sessions will be organized for local actors to ensure compliance with these benchmarks.</u>
Draft Law 29-18 on the Organization of Construction Operations ("Building Code")	Establishes a technical-administrative framework to regulate the construction sector, including construction materials, stakeholder roles, and site management conditions.	<u>The project will comply with the draft building code's requirements regarding technical specifications, construction materials, and project management. It will ensure coordination among relevant stakeholders—engineers, architects, contractors—based on clearly defined roles. Site operations will follow safety and environmental protocols as required by the draft law.</u>
Urbanization Suitability Maps (CAU)	Nationwide expansion of urban planning tools to enhance resilience against natural risks.	<u>The project will refer to CAU data to assess natural risk exposure (e.g., landslides, floods) before selecting and designing interventions. It will prioritize resilient urban planning and infrastructure development based on</u>

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	35 CAUs launched by the Ministry.	<u>identified risk zones, contributing to the long-term safety and suitability of residential areas.</u>
Law 12-03 on Environmental Impact Studies (EIS) & Law 49-17 (2020) on Environmental Assessment	Establishes environmental impact assessment requirements.	<u>The project will conduct Environmental Impact Assessments (EIAs) for all relevant activities. These assessments will identify environmental risks, propose mitigation measures, and ensure compliance with Moroccan environmental assessment procedures. Public consultations will be included where required to promote transparency and accountability.</u>
Law 11-03 on Environmental Protection & Development (2003)	Introduces the "polluter pays" principle and requires public administration to protect urban areas from pollution and nuisances.	<u>Environmental protection measures will be mainstreamed throughout the project, including pollution prevention, green infrastructure, and urban greening. The project will adopt the "polluter pays" principle where applicable and promote sustainable waste management to reduce nuisances and improve quality of life in urban neighborhoods.</u>
Law 81-12 on Coastal Protection & Development (2015)	Promotes sustainable integrated management of coastlines and emphasizes climate risk considerations.	<u>In coastal zones of the Tangier-Tetouan-Al Hoceima Region, the project will integrate nature-based solutions and coastal ecosystem protection. Urban planning will avoid high-risk coastal areas and promote integrated coastal management, aligned with climate change adaptation priorities set by this law.</u>
Law 36-15 on Water Resources (2016)	Establishes rules for decentralized and participatory water management. Promotes wastewater reuse, desalination, and hydric resource expansion.	<u>The project will promote water efficiency in buildings and public spaces through smart irrigation, low-flow fixtures, and awareness campaigns. Where feasible, greywater reuse and stormwater harvesting will be explored. Community engagement activities will support participatory water resource management aligned with the decentralization principle of the law.</u>

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E. Describe if there is duplication of project/programme with other funding sources, if any.

The TTA Region has benefited from several climate change adaptation projects, such as the housing climate plan and the territorial climate plan. However, the available financial resources are not enough for carrying out the identified measures. The project will avoid overlapping with other projects and will build on the lessons learned where possible as indicated in the table below.

Table 6: Duplication with other funding source

Project title	Status	Implementation period	Complementarities/lessons learned
Urban Resilience Handbook for Moroccan Cities (available in French and Arabic)	Completed (As part of the <i>Strengthening Urban Resilience in Morocco Project</i>)	Handbook published in 2022	This project supported 2 pilot cities, Fez and Mohammedia, in preparing urban resilience strategies and action plans to develop a holistic and integrated approach for mainstreaming Disaster Risk Management (DRM) at the city level. Some of the key lessons learned include: the importance of integrating DRM and CC adaptation across sectors and incorporating future climate scenarios into urban planning for effective resilience-building, implementing of NbS can be more cost-effective and sustainable than traditional infrastructure approaches, and the success in pilot cities can lay the groundwork for scaling-up urban resilience strategies across Morocco and other regions. The

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			handbook also provides practical guidance for cities to develop and implement resilience strategies.
Des Bâtiments Sûrs et Durables pour Renforcer la Résilience Urbaine: Évaluation du Cadre Réglementaire Marocain pour la Prévention des Risques dans l'Aménagement du Territoire et de la Construction (World Bank Group)	Completed (As part of the Building Regulation for Resilience Program)	2020	This study was conducted to assess and improve the urban planning and construction regulations in Morocco, particularly in relation to risk management, urban resilience, and sustainable development. This study was important to better understand the risks associated with climate-related hazards as well as anthropogenic risks on the built environment in Morocco as well as the building regulatory framework, supporting the government's efforts to comply with safe standards for land use and construction.
Community-based Adaptation in Morocco Programme (UNDP)	Completed	2008-2012	This multi-partner program in Morocco consists of 7 projects addressing various climate-related challenges, particularly water scarcity, declining agricultural yields, and soil erosion. The program focuses on building resilience at the local level through community-based adaptation activities in natural resource-dependent communities, targeting ecosystems such as agricultural areas, forests, and oases, rather than highly-dense urban areas. The target areas of this program do not overlap with the region covered by the project proposal, however, there are notable complementarities, particularly in the areas of awareness-raising, policy-oriented capacity building, and strengthening local adaptive capacities. The full project proposal can also build upon lessons learned from the implementation of anti-erosion and soil regeneration measures, particularly those that involve NbS or ecosystem-based adaptation, to further enhance ecosystem resilience.
Supporting the foundations for sustainable adaptation planning and financing in Morocco (UNDP-led, GCF readiness support project)	On-going	2021-on-going	This GCF NAP readiness support project aims to strengthen Morocco's institutional framework for adaptation planning, enhance regional and local capacities for adaptation planning and financing, develop regional adaptation plans for 3 vulnerable regions along with their financial strategies and reinforcing the adaptation component in 2 Territorial Plans against Global Warming (PTRC). The regional adaptation plans were designed for regions that are not part of the TTA region targeted by this project. Close coordination with UNDP will be established to ensure that lessons learned from the project are effectively applied, particularly the methodology used to integrate climate adaptation into development and territorial planning, as well as the guidelines developed for

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			regional-level climate vulnerability and risk assessments and complement the national-level capacity-building efforts for adaptation planning.
Implementing NBS in climate policies: First lessons from Morocco and Tunisia (study by IDDRI and IUCN)	On-going (part of the Nature-based solutions in the Mediterranean region project)	Study published in 2017 Project (2017-on-going)	The key lessons learned from the study highlight the importance of integrating NbS with biodiversity protection to address both climate risks and ecosystem restoration. An important takeaway is the need to prioritize biodiversity conservation and avoid overexploitation when implementing NbS projects, ensuring that biodiversity concerns are considered throughout planning and execution. Also, aligning NbS measures with existing policies and incorporating biodiversity targets into climate strategies will strengthen impact and ensure long-term sustainability.
Urban Adaptation to Climate Change in the Maghreb Project (UrbA-CliiMa, GIZ)	On-going	2024-2027	This ongoing project has significant potential for complementarity, as it focuses on enhancing climate change resilience at the local level, but with different geographic and sectoral emphases. It aims to build capacity for climate adaptation in urban areas across 30 Maghreb cities, including the development of local risk profiles and adaptation plans. The two projects can collaborate by sharing knowledge and best practices, particularly in integrating NbS into urban and housing sector resilience efforts, while supporting mutual capacity building through experience exchanges that could also help replicate successful housing sector solutions across other regions.

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F. If applicable, describe the learning and knowledge management component to capture and disseminate lessons learned.

In addition to Component 3, which is dedicated to knowledge management, the other components of the project contribute directly to knowledge management mechanisms and dissemination of lessons learned at local, national and international levels. Through these knowledge management mechanisms, practical experiences in the field will be capitalized and shared widely with the larger public and can be used in policy making.

The participatory approach adopted at the local level, through workshops, field visits and trainings, will not only increase the knowledge of local communities in planning and implementing resilience actions, but also allow them to take ownership of the project and maintain the infrastructure that will be put in place. Involving local communities in the implementation of the project would also contribute to the dissemination and sharing of information, as well as to the training of these communities.

The development of a strategic communication plan will be an effective tool for disseminating learning at the regional and national levels. Indeed, knowledge on assessment of vulnerability and risks related to climate change, as well as on adaptation, will be consolidated in manuals that will be accessible to project managers. These manuals will allow for a broad sharing of lessons learned in the development and implementation of the project throughout the country. A resilient neighborhood repository will also be developed and will remain available for replication at the regional and national levels. ~~The resilience-neighbourhood-is~~ repository is part of the climate change knowledge management database. It will include all the technical data sheets on the nature-based solutions implemented during the project, in addition to all the necessary illustrations. This technical data sheets and illustration will help other districts to implement similar NbS in their territory.

It is worth mentioning that the climate change knowledge management database will capitalize on all the data and information produced as part of this project and that could be used to strengthen resilience in other municipalities in the TTA region. This data and information could also be used to strengthen the knowledge of local authorities in other regions of Morocco. The proposed repository will be structured into different components. By way of illustration, the first component will include all the technical data sheets on the nature-based solutions implemented during the project. A second component will bring together all the technical guides and awareness-raising guides aimed at public institutions, municipalities, NGOs, and schoolchildren. The technical guides will describe the various stages involved in implementing nature-based solutions. They will complement the awareness-raising guides aimed primarily at the public and schoolchildren. The repository will include another component offering illustrated guides t

methods for assessing the vulnerabilities and risks associated with climate change at the neighborhood level. In addition to these components, there is another that brings together all the data required for such an assessment. In ~~particular, this~~ particular, this includes data relating to climate data, hazards and extreme events, exposure, vulnerabilities, damage, and losses. ~~f~~The various products resulting from the knowledge management activities will be capitalized on through the repository components (as cartographic and alphanumeric data and documents). These will be collected throughout the project. Similarly, a data collection protocol will be drawn up and signed by all the stakeholders potentially holding the data, to ensure regular update of the repository and through that the continuity and sustainability. At the international level, the UN-Habitat website will be a tool for disseminating the knowledge generated by this project. ~~f~~The knowledge management strategy will be developed during the elaboration of the strategic communication plan, in which the objectives and corresponding targets will be made explicit, as well as the strategies to guarantee the sustainability of the process. At this level, the means and tools, including media, social networks, documentaries, etc., to capture and disseminate the knowledge acquired as a direct result of the project interventions will also be described. ~~e~~In addition, in order to ensure sustainability of knowledge management, a climate change knowledge management database for the housing sector will be created during this project. This database will be developed in a collaborative manner to ensure continued ownership after project implementation.

G. Describe the consultative process, including the list of stakeholders consulted, undertaken during project preparation, with particular reference to vulnerable groups, including gender considerations, in compliance with the Environmental and Social Policy and Gender Policy of the Adaptation Fund.

In order to select the priority areas to be considered in the AF project, a participatory workshop was organized. This workshop was attended by representatives of all institutions and actors involved in climate change adaptation. Furthermore, consultations ~~will be~~ were held with National and local governments, UN agencies, NGO's, local communities, and vulnerable groups and other relevant stakeholders in order to identify vulnerabilities and risks related to climate change, needs and priorities, for the concept note stage. Furthermore, several meetings ~~s~~ were organized with regional council and presidents of the municipalities to discuss the projects ~~contents~~ components and take-taking into account different suggestions. The identification of marginalized and vulnerable groups, as well as Indigenous peoples in the targeted areas, was carried out through a participatory approach in coordination with national and local authorities. The selection of the municipalities was based on objective criteria, including exposure to climate hazards, the total number of households, the multidimensional poverty rate, and building density. These criteria ensured a focus on areas with high vulnerability and significant needs. At the design stage, consultations were held with local communities, including marginalized and vulnerable groups, to ensure their active involvement and input. This participatory process included discussions with local authorities and community representatives to identify specific needs and priorities, ensuring cultural appropriateness and alignment with local realities. The concerns and interests of these groups were integrated into the project design through the co-selection of activities by

communities and local authorities. This approach guaranteed that the proposed interventions address their specific vulnerabilities while promoting environmental, social, and economic benefits. These efforts reflect a strong commitment to inclusivity/inclusion, ensuring that the project supports and uplifts the most disadvantaged groups in the targeted areas. Women played an active role in the consultation process, demonstrating strong engagement from the outset. In the first consultation session, more than 60% of participants were women, highlighting their commitment to shaping the project's development and ensuring their voices were heard in the decision-making process.

In Morocco, the national gender machinery is led by the Ministry of Solidarity, Social Integration and Family (MSSIF), which is responsible for promoting gender equality, women's empowerment, and integrating gender into national development policies through its dedicated Directorate for Women. Coordination across sectors is ensured by the Interministerial Committee for Equality and Parity (CIEP), while the Centre of Excellence for Gender-Responsive Budgeting (CE-BSG), housed within the Ministry of Economy and Finance, supports the integration of gender into public finance systems. The National Human Rights Council (CNDH) also plays a key role in monitoring gender-based discrimination and promoting women's rights. These institutional mechanisms are complemented by an active civil society and framed by the National Strategy for Equity and Equality (SNIEG), which guides Morocco's efforts to mainstream gender across all sectors. In addition to that, At the local level, Equity and Gender Equality Mechanisms (Instances d'Équité, d'Égalité des Chances et de l'Approche Genre) have been established within municipalities to promote participatory governance, ensure gender mainstreaming in local development planning, and enhance women's participation in public life.

Other relevant women's civil society organizations active nationally and/or regionally:

- Association Démocratique des Femmes du Maroc (ADFM) A leading national feminist organization advocating for women's rights, gender equality, and law reform.
- Union de l'Action Féminine (UAF) Active in gender equality advocacy, legal aid, and social empowerment programs for women.
- Forum des Femmes au Rif Based in the Al Hoceima region, this group works on women's empowerment, socio-economic inclusion, and gender-based violence.
- Association Ennakhil pour la Femme et l'Enfant (active in several regions) Works on gender-based violence, women's leadership, and socio-legal support.
- Women's Cooperatives and Socio-Economic Associations in the Region Consider including local cooperatives (especially in agriculture, crafts, tourism) that directly engage women and may benefit from resilience-building efforts.

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Table 7: Summary of consultations' discussions and outcomes

Consultation	Stakeholders	Topics discussed	Outcomes	Consideration in project development
Consultation 1 May 12, 2022 Preliminary Scoping Consultation	<u>National Ministries & Agencies:</u> Ministry of National Territory Planning (MATNUHPV), Ministry of the Interior, DGRN, DQAT, DEGR <u>Regional & Provincial Directorates</u> DRHPV (Tangier, Tetouan, Larache), DPHPV (Chefchaouen, Al Hoceima), DRE (TTA),	Climate risks in urban housing areas (flooding, marine submersion, landslides); past disaster impacts; institutional barriers to adaptation; integration with	Identified specific high-risk neighborhoods (e.g., Mghogha in Tangier, coastal neighborhoods in Al Hoceima); recognized gaps in local implementation capacity and funding <ul style="list-style-type: none"> • Concept note was clarified for all stakeholders. 	These areas were prioritized in Component 1 for on-the-ground interventions; institutional arrangements were aligned with existing Ministry mandates to enhance feasibility and coordination <ul style="list-style-type: none"> • Stakeholder inputs helped refine project scope and priorities.

	<p>DRE/OREDD, DRTEUrban Planning & Environment Tetouan Urban Agency, <u>Regional Urban Planning Inspectorates</u> (Tangier, Tetouan), Regional Inspectorate of Urban Planning & Agriculture, Eaux et Forêts du Rif <u>Regional & Local Authorities</u> Wilaya of Tangier, TTA Regional Council, Vice-President of the Regional Council of Architects <u>Technical & Scientific Partners</u> FSTT (Faculty of Sciences and Technology of Tangier), AMEE (Energy Efficiency Agency),</p>	<p>national housing strategy</p>	<ul style="list-style-type: none"> • Discussion guided the selection of municipalities. • Stakeholders provided relevant data and feedback. 	<ul style="list-style-type: none"> • Selection of municipalities ensured alignment with national/local priorities.
<p>Consultation 2 June 10, 2022 Local Authorities & Community Engagement Workshops</p>	<p>Municipality of Tetouan, Municipality of Al Hoceima, Municipality of Chefchaouen Neighborhood Committees, women's associations <u>related to women's rights and protection, economic empowerment, and promotion of gender equality in public life</u>, youth groups. <u>Al Houceima</u> Association bleue Mediterranean league for youth Association Azir Association Chabab Tadamon <u>Chefchaouen</u> Association TALASEM-TANE pour l'environnement et le développement (ATED) Association ADL Almaghreb (association de développement locale Almaghrib) Tetouan Association ASVT Tétouan</p>	<p>Local vulnerabilities (inadequate drainage, informal housing on slopes), community adaptation priorities (safe evacuation routes, slope stabilization, housing retrofitting), past interventions that failed or succeeded</p>	<p>Local priorities ranked: (1) slope stabilization, (2) drainage upgrades, (3) early warning systems; community distrust of previous projects addressed by participatory design tools</p> <ul style="list-style-type: none"> • Concept note was well understood by local representatives. • Guided the selection of neighborhoods. • Community representatives expressed interest and engagement. 	<p>Component 1 redesigned to include slope stabilization and green infrastructure solutions based on local knowledge; planning and monitoring tools from Component 3 made community-accessible to ensure transparency and trust</p> <ul style="list-style-type: none"> • Neighborhood selection was based on local needs and priorities. • Strengthened local ownership and commitment to implementation.

Consultation 3, 10 april 2025	Ministry of National Territory Planning (MATNUHPV) and the provincial directorates Municipality of Tetouan, Municipality of AL Hoceima, Municipality of Chefchaouen	Project submission progress, need for data on economic losses.	The need for project interventions is still needed and urgent with the last floods that occurred.
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H. Provide justification for funding requested, focusing on the full cost of adaptation reasoning.

The proposed project’s components, outcomes, and outputs are fully aligned with national and local government priorities, institutional strategies, and the needs identified at the municipality level, particularly for vulnerable groups. It also aligns with the Adaptation Fund’s results framework (see Part II, Section A). This strong alignment has enabled the development of a comprehensive and integrated approach where all components are mutually reinforcing, ensuring that project activities effectively address gaps in Morocco’s current climate change response.

The project prioritizes maximizing funding for Component 1 while ensuring that allocations to Components 2 and 3 provide essential support, enhance sustainability, and maintain overall project quality. The table below justifies the requested funding by demonstrating the total cost of adaptation, comparing the impact of Adaptation Fund support versus the baseline scenario (no funding), and highlighting the expected project outcomes.

Table 8: Overview of impact of AF funding compared to no funding (baseline) related to expected project outcomes

Outcomes	Baseline (without AF)	Additional (with AF)	Comment and alternative adaptation scenario's
Outcome 1 Strengthened urban resilience in vulnerable neighborhoods	The TTA region is highly vulnerable to climate change, with frequent floods, sea level rise, and shoreline erosion causing significant damage and losses. Vulnerable neighborhoods, particularly informal settlements, are at heightened risk due to rapid urbanization, inadequate infrastructure, and limited resources for climate adaptation. Without sufficient funding for adaptation, the housing sector remains exposed to the increasing impacts of climate hazards, endangering both buildings and residents. Vulnerability assessments at the municipal level are necessary to identify the most at-risk areas and tailor context-specific solutions. A territorial climate plan and an adaptation plan for the housing sector are developed for the TTA region but the funds required for	With AF funding, stakeholders at the national and sub-national levels will gain a clearer understanding of the specific vulnerabilities in the housing sector at the community level. This will enable the identification and implementation of NbS that offer multiple co-benefits, improving the resilience of buildings to flooding and landslides. Additionally, the damage related to floods will be reduced by approximately 40%, within the studied area.	Without adaptation measures to enhance the resilience of the housing sector, the region will continue to experience escalating damage from climate hazards. In the coming years, the TTA region is expected to face significant annual losses from flooding, with an estimated cost of 333,020,720 DH/year (approx. USD 330k) in the three provinces. Without a comprehensive vulnerability assessment to identify and prioritize the most at-risk areas, targeted resilience interventions will fail to deliver effective results results , and adaptation plans for the housing sector will be

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	implementation are insufficient.		fragmented and insufficient, hindering substantial progress to build resilience at the building level.
Outcome 2 Stakeholders are fully informed and have strengthened capacity to cope with climate change risks	The targeted communities have limited understanding of local climate change vulnerabilities and disaster risks and have no strategies in place to address these challenges.	The AF funding will enable the targeted communities to be fully involved in identifying climate change vulnerabilities and disaster risks and in implementing the necessary adaptation measures. The funding will drive transformative change by developing the CC neighborhood reference framework that will allow further replication and scaling up in other areas, in addition to facilitate the enabling environment for NbS integration at the housing sector through awareness raising, development of technical guides and capacity building.	The housing sector in vulnerable areas of the TTA region would struggle to implement essential climate resilience strategies. The lack of resources for a climate-resilient neighborhood framework, awareness-raising, and capacity-building would leave communities, especially marginalized groups, unprepared to address climate risks and hinder the adoption of NbS for long-term resilience.
Outcome 3 Enhanced knowledge management and sharing of information for increased climate resilience in Morocco's neighborhoods	The housing sector currently lacks a centralized platform for managing climate change knowledge, which limits the integration of climate resilience into housing policies and practices. There is also a gap in M&E systems needed to track progress and assess the effectiveness of adaptation measures.	The activities related to this outcome, including the establishment of a CC knowledge database, will enable effective tracking and continuous improvement of adaptation measures in the housing sector. This will create a replicable and scalable framework that can be expanded to other regions, enhancing alignment with national climate objectives and fostering long-term resilience through informed decision-making.	Without the knowledge management component, there will be a critical void in the housing sector's capacity to manage and disseminate essential data on climate adaptation. The absence of a robust monitoring and evaluation system will impede the tracking of adaptation efforts and the assessment of their effectiveness and limit the sector's ability to replicate successful strategies and scale resilience initiatives.

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I. Sustainability of the project/programme outcomes

Technical sustainability

The project will be implemented in close partnership with communities and public utilities, thus ensuring the technical sustainability of the implemented infrastructure and NbS. This will be done through:

- Awareness raising, training and capacity building: Training and awareness raising of local communities and government institutions on the planning, construction and maintenance of the implemented infrastructure and NbS interventions will support the technical sustainability. Local players will be trained in the planning, construction and maintenance of resilient infrastructures, ensuring their proper long-term operation.

- Engaging utilities: A strong partnership with utilities will help maintain installed infrastructure and ensure its sustainable management. Local utilities will play a key role in maintaining infrastructure through sustainable financing mechanisms (such as tariffs tailored to the needs of vulnerable populations), ensuring that infrastructure remains functional after the end of the project.
- Establishing local risk management committees to monitor and maintain these infrastructures.

Social sustainability

By fully involving informal settlement households in project activities, including assessments, plan/strategy development, and monitoring, the project aims to achieve ~~inclusivity~~-inclusion and ownership of project interventions, as well as sustainable household awareness and engagement. In addition, the increased resilience of homes and infrastructure at the community level will reduce community vulnerabilities in the long term. In addition, households will benefit from training sessions and awareness raising on building and maintaining resilient homes (and other infrastructure) and improving their livelihoods in a sustainable and resilient manner. The project directly addresses the needs of the most vulnerable communities and will help to reduce imbalances in social dynamics with regard to vulnerability to climate impacts.

Economic sustainability

Investing in the resilience of vulnerable physical, natural, and social assets and ecosystems is a sustainable economic approach. It helps avoid future costs related to climate change and disaster impacts, as well as enhances livelihood options. The city-level and community level plans will include economic opportunities, as well as the ongoing resilience building within this project opportunities, including economic benefits of resilience, which can be integrated into national plans and policies. Implementing NbS can also offer a cost-effective alternative to traditional infrastructure by reducing long-term climate-related disaster impacts and lowering both upfront and maintenance costs.

Environmental Sustainability

The implementation of site-specific NbS measures to strengthen the resilience of communities will also raise the resilience of the environment, e.g. through protecting ecosystems, enhancing biodiversity and/or reducing waste production.

Institutional sustainability

The project will pave the way for the national government and local authorities to support and expand the project to other neighborhoods and municipalities through the governance framework, processes and tools provided. Implementation units will be designated at the municipal level to implement the project to ensure that the project results are well anchored in the local government institutional framework. The project will be implemented with the effective involvement of civil society to ensure lasting local ownership. In addition, trainings will be organized to build the capacity of the governments involved and ~~best~~-practices and lessons learned from all component results will be shared at the national and sub-national levels. In order to ensure the institutional sustainability of adaptation benefits after the end of the project, several mechanisms ~~are~~-will be put in place:

- Capacity building will include ~~the~~-sharing of ~~the~~ ~~best~~-practices and lessons learned from the results of each component at national and sub-national levels. This will facilitate replication and extension of the project with other funds after its completion, building on existing partnerships and funding networks.
- As outlined in section D, the project alignment with national and sub-national strategies and plans ensures sustainability and potential replication in other ~~neighbourhoods~~neighborhoods, which is also supported by the knowledge products that will be developed and shared with national and local governments.

J. Provide an overview of the environmental and social impacts and risks identified as being relevant to the project/programme.

The proposed project aims to be fully aligned with the Environmental and Social Policy (ESP) of the Adaptation Fund. To this end, an initial screening has been carried out to evaluate environmental and social impacts of the project, and areas where steps will be taken and where further assessment is needed. The selection process resulted in the project being classified as **category B**, or medium-risk projects/programs, given the suggested physical interventions, i.e. NbS that are associated with moderate environmental and social risks and/or impacts. The proposed activities are on a small scale, very localized, and will be managed by communities to the extent possible. This means that the potential for direct impacts is low and localized, and that there may be few indirect impacts, which will be assessed during full project development. Transboundary impacts are very unlikely as the target area is not close to a border. Under these conditions, cumulative impacts are also unlikely. The expected impacts can be effectively mitigated through the implementation of an environmental and social management plan (ESMP), while any unforeseen impacts can be controlled and addressed through an environmental and social monitoring plan (E&S monitoring plan).

Table 9: Overview of the environmental and social impacts and risks identified as being relevant to the project

Checklist of environmental and social principles	Risk rating (e.g., medium or low)	No further assessment required for	Potential impacts and risks – further assessment and management required for compliance
<i>Compliance with the Law</i>	<u>Low</u>		Environmental & social impact assessments in compliance with AF and UN-Habitat policies, as well as Moroccan law will be conducted
<i>Access and Equity</i>	<u>Medium</u>		Potential risk of social tensions due to perceived favoritism or unequal distribution of resources. This will be assessed and included in the ESMP during full project development Potential risk of infringing on land use rights. This will be assessed and included in the ESMP during full project development
<i>Marginalized and Vulnerable Groups</i>	<u>Medium</u>		The project will proactively identify, map, and assess all marginalized and vulnerable groups within the target urban neighborhoods. This includes, but is not limited to, women and girls, persons with disabilities, older persons, children, low-income households, and migrant communities. A social inclusion analysis will be conducted during the preparation phase to better understand their specific needs, risks, and capacities. To ensure that these groups are not adversely affected, the project will adopt inclusive and participatory approaches across all phases—planning, implementation, and monitoring. This will involve targeted consultations, focus group discussions, and interviews with gender-specific and marginalized groups, as well as the collection of personal stories and evaluation surveys. The project will also employ accessible communication tools and actively engage community-based organizations that work directly with vulnerable populations, ensuring their voices are heard and integrated into decision-making processes. Specific social safeguard measures will be embedded in the Environmental and Social Management Plan (ESMP), with mechanisms to monitor impacts, address grievances, and adjust interventions if unintended negative effects are identified. The project will also prioritize equitable access to the benefits of Nature-based Solutions (NbS), ensuring that green spaces, ecosystem services, and resilience measures are designed to be accessible and beneficial to all, especially those most at risk.
<i>Human Rights</i>	<u>Low</u>		The project will align with Morocco's commitments under international human rights treaties and uphold fundamental rights and freedoms, including protection from arbitrary detention, respect for freedom of expression and association, and other relevant concerns raised by the UN Human Rights Council Special Procedures. Particular attention will be

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			<p>given to land use rights to determine any links to indigenous communities, notably Amazigh populations in the Tangier-Tetouan-Al Hoceima Region. Should any such connections be identified, the project will ensure that these communities are fully engaged through free, prior and informed consent (FPIC), and that their rights are respected in line with international standards.</p> <p>The project will also avoid any form of involuntary resettlement. In the unlikely event that displacement becomes necessary, a robust Resettlement Action Plan (RAP) will be prepared in compliance with international best practices to ensure fair compensation and livelihood restoration.</p> <p>All human rights risks and safeguards, including gender equality, protection of housing rights, and equitable access to benefits, will be systematically assessed and addressed as part of the Environmental and Social Management Plan (ESMP). This will include concrete measures for monitoring, stakeholder engagement, grievance redress, and mitigation.</p>
<i>Gender Equality and Women's Empowerment</i>	<u>Low</u>	✗	<p>Additional assessments and continuous monitoring will be carried out to ensure that the project's gender-related objectives are consistently upheld. Inclusive selection mechanisms will be designed to prioritize the participation of women and marginalized groups through the use of clearly defined criteria, identification of specific target groups at the neighborhood level, and the integration of participatory methods such as focus group discussions, interviews, surveys, and storytelling. These tools will provide deeper insights into community needs and challenges, while also informing tailored risk mitigation strategies developed in collaboration with gender-focused and local community groups. This approach aims to promote transparency, ensure equitable representation, and foster meaningful engagement throughout the project cycle.</p>
<i>Core Labour Rights</i>	<u>Low</u>		Potential risk of exploitation or unsafe working conditions for workers. This will be assessed and included in the ESMP during full project development to align with ILO standards
<i>Indigenous Peoples</i>	<u>No risk</u>	X	<u>The project is being implemented in urban residential neighborhoods in the Tangier-Tetouan-Al Hoceima region, which are not known to be home to distinct Indigenous communities as recognized under international standards. The population in the project areas consists primarily of urban and peri-urban residents, including vulnerable groups such as low-income households, women, youth, and persons with disabilities. Therefore, no specific risks related to Indigenous Peoples are anticipated.</u>
<i>Involuntary Resettlement</i>	<u>Medium</u>		Potential risk of involuntary resettlement in areas suffering from landslides. This will be assessed and included in the ESMP during full project development.
<i>Protection of Natural Habitats</i>	<u>No risk</u>	X	<u>The project is being implemented in urban residential neighborhoods which are not known to be home of any natural habitats.</u>
<i>Conservation of Biological Diversity</i>	<u>No risk</u>	X	<u>The project is being implemented in urban residential neighborhoods in the Tangier-Tetouan-Al Hoceima region, which are not known to be home to biological diversity.</u>
<i>Climate Change</i>	<u>Medium</u>	✗	<u>A detailed and comprehensive assessment of vulnerability and risks related to climate change will be essential for this component and will identify the degree of vulnerability of the neighborhoods in the three selected municipalities.</u>
<i>Pollution Prevention and Resource Efficiency</i>	<u>No risk</u>	X	<u>There is no anticipated risk of pollution from this project, as the proposed interventions are primarily based on nature-based solutions.</u>
<i>Public Health</i>	<u>Low</u>		Potential risk of accidents or injuries in NbS areas. This will be assessed, taken into consideration in the NbS design and included in the ESMP during full project development.
<i>Physical and Cultural Heritage</i>	<u>No risk</u>	X	<u>The project is being implemented in urban residential neighborhoods which are not known to be home of any physical and cultural heritage.</u>
<i>Lands and Soil Conservation</i>	<u>Medium</u>		Potential risk of soil erosion or compaction during construction. Long-term degradation of land if soil health is not maintained. This will be assessed and included in the ESMP during full project development.

PART III: IMPLEMENTATION ARRANGEMENTS

A. Project/programme alignment with the Results Framework of the Adaptation Fund

Table 10: Alignment of the project with results framework of adaptation fund

Project Objective	Project Objective Indicator(s)	Fund Outcome	Fund Outcome Indicator	Grant Amount (USD)
1. Strengthening urban resilience to climate change in vulnerable residential neighborhoods	Number of residential neighborhoods benefiting from climate resilience strengthening	Outcome 1: Reduced exposure to climate-related hazards and threats	1. Relevant threat and hazard information generated and disseminated to stakeholders on a timely basis	6,020,000
2. Awareness, <u>Awareness,</u> communication, and capacity building	Number of residential neighborhoods involved in awareness-raising, communication, and capacity-building on climate change adaptation	Outcome 2: Strengthened institutional capacity to reduce risks associated with climate-induced socioeconomic and environmental losses	2.1. Capacity of staff to respond to, and mitigate impacts of, climate-related events from targeted institutions increased	950,000
		Outcome 3: Strengthened awareness and ownership of adaptation and climate risk reduction processes at local level	3.1 Percentage of targeted population aware of predicted adverse impacts of climate change, and of appropriate responses 3.2 Percentage of targeted population applying appropriate adaptation responses	
		Outcome 4: Increased adaptive capacity of communities to respond to the impacts of climate change. <u>Increased adaptive capacity within relevant development sector services and infrastructure assets</u>	4.1. Responsiveness of development sector services to evolving needs from changing and variable climate 4.2. Physical infrastructure improved to withstand climate change and variability-induced stress	
3. Monitoring, evaluation, and capitalization of experience in adaptation	Number of national and sub-national stakeholders involved in monitoring, evaluating and capitalizing of experience in adaptation	Outcome 7: Improved policies and regulations that promote and enforce resilience measures	7. Climate change priorities are integrated into national development strategy	750,000
		Outcome 8: Support the development and diffusion of innovative adaptation practices, tools and technologies	8. Innovative adaptation practices are rolled out scaled up, encouraged and/or accelerated at regional, national and/or subnational level.	

Project Outcome(s)	Project Outcome Indicator(s)	Fund Output	Fund Output Indicator	Grant Amount (USD)
1.1 Strengthened urban resilience in vulnerable residential neighborhoods	Proportion of vulnerable residential neighborhoods with strengthened resilience	Output 1.1: Risk and vulnerability assessments conducted and updated	1.1. No. of projects/programmes that conduct and update risk and vulnerability assessments (by sector and scale) 1.2 No. of early warning systems (by scale) and no. of beneficiaries covered	6,020,000
2.1 Stakeholders are fully informed and have strengthened capacity to cope with climate change risks	Number of national, sub-national stakeholders and local communities informed and made aware of the project with their capacities strengthened Number of national and sub-national stakeholders integrating climate change awareness into institutional activities	Output 2.1: Strengthened capacity of national and sub-national centres and networks to respond rapidly to extreme weather events Output 3.1: Targeted population groups participating in adaptation and risk reduction awareness activities Output 3.2: Strengthened capacity of national and subnational stakeholders and entities to capture and disseminate knowledge and learning	2.1.1. No. of staff trained to respond to, and mitigate impacts of, climate-related events (by gender) 2.1.2 No. of targeted institutions with increased capacity to minimize exposure to climate variability risks (by type, sector and scale) 3.1.1 No. of news outlets in the local press and media that have covered the topic 3.2.1 No. of technical committees/associations formed to ensure transfer of knowledge 3.2.2 No. of tools and guidelines developed (thematic, sectoral, institutional) and shared with relevant stakeholders	950,000
3.1 Enhanced knowledge management and sharing of information for increased climate resilience in Morocco's neighborhoods	Number of national, sub-national stakeholders and local communities informed of project products and results Number of national and sub-nationals stakeholders reproducing project results	Output 7: Improved integration of climate-resilience strategies into country development plans Output 8: Viable innovations are rolled out, scaled up, encouraged and/or accelerated.	7.1. No. of policies introduced or adjusted to address climate change risks (by sector) 7.2. No. of targeted development strategies with incorporated climate change priorities enforced 8.1. No. of innovative adaptation practices, tools and technologies accelerated, scaled-up and/or replicated 8.2. No. of key findings on effective, efficient adaptation practices, products and technologies generated	750,000

¹ The AF utilized OECD/DAC terminology for its results framework. Project proponents may use different terminology but the overall principle should still apply

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

A. Record of endorsement on behalf of the government

<p>Mohammed BARAOUI Director of Climate and Biodiversity Department of Sustainable Development, Ministry of Energy Transition and Sustainable Development Avenue Araar, 420/1 Secteur 16, Hay Riad, Rabat, Morocco Tel: +212 6 62 63 44 73 Email: baraoui@environnement.gov.ma Alternate emails: baraoui.mohammed@gmail.com ;</p>	<p>Date: <i>(Month, day, year)</i></p>
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B. Implementing Entity certification

<p>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 Moroccan INDC, NAP, ... and subject to the approval by the Adaptation Fund Board, <u>commit to implementing the project/programme in compliance with the Environmental and Social Policy of the Adaptation Fund</u> and on the understanding that the Implementing Entity will be fully (legally and financially) responsible for the implementation of this project/programme.</p>	
<p style="text-align: center;">Rafael Tuts Director, Programme Division UN-Habitat Signature</p>	
<p>Date:</p>	<p>Tel. and email: (+254) 20 7621234 raf.tuts@unhabitat.org</p>
<p>Project Contact Person: Soukaina Ait El Qadi Tel. And Email: +212661967800 soukaina.aitelqadi@un.org</p>	

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.

ROYAUME DU MAROC

MINISTRE DE LA TRANSITION ENERGETIQUE
ET DU DEVELOPPEMENT DURABLE

Département du Développement Durable

DCDB



المملكة المغربية

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قطاع التنمية المستدامة

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م.م.ت.ب

To : The Adaptation Fund Board
c/o : Adaptation Fund Board Secretariat
Email: secretariat@adaptation-fund.org
Fax : 2025223240/5

Subject: Endorsement for “Strengthening climate change resilience of urban residential Neighborhoods, case of the Tangier -Tetouan- Al Hoceima region” project.

We would like to refer to the project “Strengthening climate change resilience of urban residential Neighborhoods, case of the Tangier –Tetouan- Al Hoceima region” in Morocco, which is included in the funding proposal submitted by UN-Habitat.

In my capacity as the Adaptation Fund Focal Point for Morocco, we acknowledge having reviewed the proposal and would like to communicate our no-objection to the proposed project as included in the funding proposal.

By communicating our no-objection, we would like to clarify that:

- (a) The government of Morocco have no-objection to the project as included in the funding proposal;
- (b) The project as included in the funding proposal is in conformity with Morocco’s National Strategic Adaptation Plan;
- (c) The program as included in the funding proposal is in conformity with relevant national laws and regulations, in accordance with the AF’s environmental and social safeguards.

We confirm that our national process for ascertaining no-objection to the project as included in the funding proposal has been duly completed. Additionally, we confirm that our no-objection applies to all activities to be implemented within the scope of the project.

We acknowledge that this letter will be made publicly available on the AF website. Please accept our kind regards.

Mr Mohammed BARAOUI
Director of Climate and Biodiversity

Annex

Annex 1.1: Consultation with stakeholders

MINUTES OF THE CONSULTATION WORKSHOP	
SUBJECT	DATE : 12/05/2022
Organization of a workshop on adapting the housing sector to climate change in the TTA Region	VENUE: Headquarters of the Chamber of Commerce, Industry and Services of the Tangier - Tetouan - Al Hoceima region
PARTICIPANTS	
<p>The workshop was attended by a number of executives and managers representing various structures, including: - UN-HABITAT, Quality and Technical Affairs Department, - Direction régionale de l'Habitat et de la Politique de la Ville- de la région Tanger-Tétouan-Al Hoceima, DGRN / MI, DRE/OREDD, DRHPV, DEGR Wilaya de Tanger, DRE / TTA,DPHPV of Chefchaouen, Tangier DRHPV, Regional Inspectorate of Urban Planning and Agriculture, Direction Régionale des Eaux et Forêts du Rif, Ministry of the Interior, DGRN / Ministry of the Interior, FSTT, AMEE,Regional Directorate of Equipment and Water, Regional Town Planning Inspectorate, Tétouan Urban Agency, DQAT / MATNVHPV, TTA Regional Council, Tetouan DRHPV, DRHPV of Larache, DPHPV of Al Hoceima, UN – Habitat, Vice-President of the Regional Council of Architects,DRTE,. A full list of workshop participants is attached.</p>	
CONTEXT & OBJECTIVES	
<p>The workshop was part of the efforts made by the Ministry of National Territory, Urban Planning, Housing and City Policy, in particular the Department of Housing and Urban Policy, to combat climate change. To this end, with technical and financial support from UN-Habitat, a concept note for a project to adapt the housing sector to climate change is currently being prepared. This concept note will be prepared using a participatory and highly concerted approach, and will be submitted to the Adaptation Fund.</p> <p>In this context, the workshop aimed to present the results of the study on the adaptation plan for the housing sector in the TTA Region, and to present the project to be submitted to the Adaptation Fund as well as their various components of the project.</p>	
BREAKDOWN	
<p>At the start of the workshop, Ms. Soraya KHALIL, Director of the Quality and Technical Affairs Department of the Ministry of National Territory, Urban Planning, Housing and City Policy, thanked the regional authorities and the TTA Regional Housing and Urban Policy Department for their support in organizing this event. She then briefly outlined the objectives of the consultation workshop, before giving an overview of the main projects undertaken by Morocco in this field in general, and more specifically in the housing and construction sector. The floor was then given to Soukaina AIT ELQADI, Programme Officer -UN-Habitat. She gave a brief account of the activities of this UN agency and the projects completed and/or underway in the MENA region and in Morocco. Particular attention was paid to those linked to strengthening urban resilience in the face of climate change. She then stressed the importance of the consultation workshop as a crucial step in the process of preparing the concept note to be submitted to the Adaptation Fund. A photo illustrating the general atmosphere of the workshop is shown below.</p> <p>Following these two presentations, the floor was given to Mr. Hicham EZZINE, consultant in the field of climate change and disaster risk. An initial presentation was given on the vulnerability and risk assessment study and the development of an adaptation plan for the housing sector in the TTA Region. Mr. EZZINE outlined the main phases of the study, followed by the methodology adopted to assess vulnerabilities and risks linked to climate change. Emphasis was then placed on the Tanger-Tétouane-Al Hoceima region's climate change adaptation plan. During this first presentation, Mr. EZZINE also gave a brief overview of the monitoring and evaluation system for adaptation to climate change. Following this initial</p>	

presentation, the floor was opened for comments and suggestions from the various participants.



Figure 1: Photo illustrating the workshop process

Mr. EZZINE's second presentation focused on the project proposal to be submitted to the Adaptation Fund. After outlining the context and objectives, Mr. EZZINE presented the project area, highlighting the criteria used to select the three municipalities (Tétouane, Al Hoceima and Chefchaouen), notably exposure to climatic hazards, total number of households, multidimensional poverty rate, building density, and the orientations of the regional directorate and the Adaptation Fund. He then gave an overview of the various components of the project.

DECISIONS TAKEN

As a result of the workshop proceedings and the discussion initiated by the participants, the following decisions were taken:

- The workshop participants endorse the proposal to be submitted to the Adaptation Fund and will provide all the necessary support for its successful completion;
- Workshop materials will be shared with participants, including the two PPT presentations;
- A consultation meeting will be held with representatives of the three above-mentioned municipalities to present the project proposal and gather suggestions;
- Other municipalities in the region may be considered for further expressions of interest to submit proposals to the Adaptation Fund or other funds.

Annex 1.1: Consultation with community

A consultation with community was carried out the 10 June 2022. The objective of this consultancy is to discuss with the representative of the community the project content, component, and actions. Some pictures and a list of presence are given hereafter.



Figure. Photo illustrating the course of the meeting

List of participants of the coordination and consultancy meeting (10 June 2022)

Royaume du Maroc


 Ministère de l'Aménagement du Territoire National,
 de l'Urbanisme, de l'Habitat et de la Politique de la Ville
 - Habitat et Politique de la Ville -
 Secrétariat Général
 Direction de la Qualité et des Affaires Techniques

Objet : Réunion de coordination relative au projet « Renforcement de la résilience au changement climatique des quartiers urbains au Maroc. Cas de la région Tanger –Tétouan – Al Hoceima » - le vendredi 10 juin 2022 à 10h à la Direction Régionale de l'Habitat et de la Politique de la Ville de Tanger – Tétouan – Al Hoceima

Nom, Prénom	Fonction	Organisme	Tel/fax	e-mail	Signature
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Youssef Sefiani	Président	Commune de Tanger	0612205805	mohamed.sefiani@gmail.com	[Signature]
Abderrahmane NASSAR	chef de service	Commune de Tanger	061313082	abderrahmane.nassar@gmail.com	[Signature]
Mouhammad Bouazza	Pr. Le Coordonneur Habitat	Commune Al Hoceima	0664481501	MOHAMMED.BOUAZZA@orange.ma	[Signature]
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AGACINI Joud	chef de service H.P.V.	DR.H.P.V Tanger			[Signature]
Samah Jilani	Architecte D.R.H.P.V.	D.R.H.P.V Tanger			[Signature]
Hicham EZZINE	Coordinateur		0660599209	ezgma@rednet.ma	[Signature]

Annex 2: Multi-criteria analysis

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1. Description of the study area

The TTA region is located in northwest Morocco. This region has undergone a process of accelerated urbanization resulting from the strong growth of its urban population, following the development of commercial, industrial and administrative activities, essentially in the region's major conurbations. The TTA region is one of the most vulnerable to climatic hazards in the country and it is highly exposed to climatic hazards, such as flooding, landslides, marine submersion and forest fires, that become increasingly frequent and intense in recent years. In this regions, the building sector is one of those highly exposed to increased rainfall, higher temperatures, etc.). This sector is also confronted with extreme weather events and climate hazards. These climatic extremes and hazards, such as floods, heat waves, landslides, etc., have a major impact and cause considerable damage to the building sector.

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2. Methodology

The prioritizing municipalities in the TTA was based on two stages. The first consisted in organizing a participatory workshop to guide the choice of the various aspects relating to vulnerability and risks associated with climate change. The second involved a multi-criteria analysis based on the guidelines resulting from the first stage. Thus, the method recommended for assessing vulnerability and risks linked to climate change for the housing sector in the TTA region was based on approach developed by the IPCC in its fifth report (AR5) and illustrated in the figure below.

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2.1. Consultation and participatory selection of hazards and criteria

In order to select the priority municipalities to be considered in the FA project, a participatory workshop was organized. The workshop was attended by representatives of all the institutions involved in climate change adaptation.

2.1.1. Selection of climatic hazards

This participatory workshop provided an opportunity to decide on the major manifestations of climate change and their impacts on the housing sector in the TTA region. To this end, the main climatic hazards likely to affect the housing sector in the region were analyzed, in particular: flooding, landslides, drought, marine submersions, heat waves and cold snaps.

2.1.2. Selection of criteria

The work undertaken during the workshop also focused on the choice of the various criteria that will help to select the priority regions. To this end, through a participatory exercise, participants identified the main criteria relating to the different components of climate risk, in line with its conceptual framework, as defined and described in the IPCC's fifth report. The different components in question are climate hazard (danger), exposure, vulnerability (sensitivity and adaptive capacity) and risks linked to climate change.

Through this participatory exercise, several criteria were chosen by workshop participants. These criteria were then reviewed in order to select the most relevant ones. The selected criteria are listed below:

- Political support and involvement of decision-makers in climate change issues;
- Demographics: number of beneficiaries, population density, etc;
- Presence of fragile ecosystems;
- Socio-economic sensitivity or vulnerability: poverty, precariousness, etc. ;
- Economic criteria: Major investments, contribution to GDP, etc. ;
- Degree of exposure of the housing sector to climatic hazards;
- Presence of different climatic conditions: climates/bioclimate and ecosystems.

3. Results of multi-criteria analysis

In order to identify the exposure of the various municipalities to climatic hazards, the risk map was superimposed overlaid toon the administrative division of the region. A summary was then drawn up and presented in the table below, showing the municipalities and their level of risk to climatic hazards.

The study enabled us to select the district at very high risk. Furthermore, the working session held with the regional stakeholders provided an opportunity to discuss the major manifestations of climate change and their impact on the various socio-economic sectors, particularly the housing sector. The results of the multi-criteria analysis show that the municipalities of the TTA region are globally exposed to risks linked to climate change and will have to cope with climatic hazards and extreme events. ties and all stakeholders, three priority municipalities were selected, taking into account not only the exposure of their housing sector to climate hazards, but also their socio-economic characteristics, such as the number of households, poverty rate and population density. These are the municipalities of Tétouan, Chefchaouen and Al Hoceima.

4. Conclusion

This study led to the selection of priority municipalities for the project to be submitted to the Adaptation Fund (AF). To this end, a multi-criteria analysis was carried out using the vulnerability and risk analysis method developed by the IPCC in its fifth report. This exercise required the organization of a participatory workshop to involve local stakeholders in the choice of priority municipalities. This work resulted in the selection of three priority municipalities, namely Tétouan, Chefchaouen and Al Hoceima, which will be the focus of this project.

Annex 5 to OPG Amended in October 2017

Table 1- Annex: Multicriteria analysis

Provinces et Préfectures	Municipalities	Inondation	Sècheresse	Glissement de terrain	Submersion marine	Vagues de chaleur	Vagues de froid	Nombre total de ménage	Taux de pauvreté multi-dimensionnelle	Densité Bati
Tanger Assilah	Tanger	+	+++	++++		+++	+++	+++++	+	+++++
	Gueznaia	++	+++	+++	++++	+++	+++	++++	+	+++
	Aqouass Briech	++++	+++	++	+++	+++	+++	+	+	++
	Assilah	+	+++	+	+++	+++	+++	++	+	+++
	Saleh chamali		+++	++++		+++	+++	+++	+++	++
Fahs Anjra	Al bahraoyine		++	+++		+++	+++	+++	+	+++
	Ksar sghir		+++	++++	+	+++	+++	+++	++	++
	Ksar el majaz		+++	+++++		+++	+++	+++	++	++
	Taghramt		+++	++++		+++	+++	++	++	++
	Belyounech		+++	+++++		+++	+++	++	++	+
M'diq Fnideq	Sabta		++	++		+++	+++			+++
	Fnideq		++	+	++	+++	+++	++++	+	++++
	M'diq	+++	+++	+	+++	+++	+++	++++	+	++++
	Martil	++	++	+	+++	+++	+++	++++	+	++++
Tétouan	Tétouan	+++	+++		+++	+++	+++	+++++	+	++++
	Azla		+++	+++	+	+++	+++	+++	++	++
	Zaouiat sidi kacem		+++	+++		+++	+++	++	+++++	++
	Oued laou		++++	+++	+	+++	+++	++	++	+++
Larache	Sahel	+	+++	++++		+++	+++	+++	++	+++
	Larache	++++	+++	++	+++	+++	+++	+++++	+	++++
	Laouamra	+	+++		+	+++	+++	+++	++	+++
Chefchaoune	Tizgane	+	++++		+	+++	+++	+++	+++	++
	Steha		++++			+++	+++	+++	+++	++
	Bni bouzra	+	+++	+		+++	+++	+++	+++	++
	Amrar		++++	+		+++	+++	++	+++	++
	Bni smih	+	++++	+		+++	+++	+++	+++	++
	M'tioua		+++++	+++		+++	+++	++	++++	++
Al Hoceima	Bni gmil	+	+++++	++++		+++	+++	++	+++	++
	Bni boufrah	++	+++++	+++		+++	+++	++	++	++
	Senada		+++++	+++		+++	+++	++	+++	++
	Rouadi		+++++	+++		+++	+++	++	+++	++
	Izemmouren	++	+++++	++		+++	+++	+	+	++
	Al hoceima		+++++			+++	+++	++++	+	++++
	Ajdir		+++++			+++	+++	+	+	+++
	Ait youssef ouali	++++	+++++			+++	+++	++	+	+++