



ADAPTATION FUND

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Adaptation Fund Board
Project and Programme Review Committee
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Bonn, Germany, 19-23 October 2026

PROPOSAL FOR CHAD



ADAPTATION FUND

ADAPTATION FUND BOARD SECRETARIAT
TECHNICAL REVIEW OF PROJECT PROPOSAL FOR
"ENHANCING CLIMATE RESILIENCE OF DISPLACEMENT-AFFECTED COMMUNITIES IN
EASTERN CHAD"

Project Title	Enhancing Climate Resilience of Displacement-Affected Communities in Eastern Chad
Project ID	AF00000565
Category	Regular size project (over \$1 million)
Type	Single country project
Stage	Concept
Country	Chad
Implementing Entity	UNHAB
Financing Requested	USD 10,000,000.00
Reviewer	Una May Gordon

Co-reviewer(s)

IE Contact Person

Camille Imbert, Jane Lumumba

Secretariat's Overall Comment

The project Enhancing Climate Resilience of Displacement-Affected Communities in Eastern Chad aims to strengthen the climate resilience of rapidly urbanizing refugee-hosting areas in eastern Chad by reducing exposure to climate hazards — including extreme heat, flooding, erosion, and drought — improving the habitability and safety of human settlements, and sustainably anchoring climate adaptation within territorial planning and institutional frameworks.

The initial technical review raises some issues, such as lack of Theory of Change diagram, lack of explicit concrete adaptation actions, economic, environmental and social benefits should be quantified where possible, consultation restricted to government endorsements and no explicit initial consultation with community or those with gender remit, as is discussed in the number of Clarification Requests (CRs) and Corrective Action Requests (CARs) raised in the review.

Country Eligibility

Is the country party to the Kyoto Protocol, or the Paris Agreement?

Response: Yes

Secretariat: N/A

Is the country a developing country particularly vulnerable to the adverse effects of climate change?

Response: Yes

Secretariat: The country ranks among the most climate-vulnerable countries globally, with an ND-GAIN score of around 27.4 (vulnerability: 0.640). It ranks among the most climate-vulnerable countries globally. It is facing the effect of increase in temperature, heighten flood and erosion risk, increasing heat waves and drought.

Project Eligibility

Has the designated government authority for the Adaptation Fund endorsed the project/programme?

Response: Yes

Secretariat: As per Endorsement letter signed by the Designated Authority, dated 10 August 2026.

Does the length of the proposal amount to no more than Fifty pages for the project/programme concept, including its annexes?

Response: Not Cleared

Secretariat: Yes. The project concept is 48 pages.

Some editorial notes:

- CR1: Please use the assigned Section titles as outlined in the Concept Proposal template. For example, Part II Section I should be Section A, followed by B, C etc.
- CR2: Please note that the Terminal Evaluation is submitted 9 months after project closure. Please amend the Projected Calendar accordingly.
- CR3: Please ensure all tables and figures have captions so they can be easily referenced.

Does the project / programme support concrete adaptation actions to assist the country in addressing adaptive capacity to the adverse effects of climate change and build in climate resilience?

Response: Pending

Secretariat: No.

It is unclear whether the project will deliver substantial tangible adaptation outcomes at scale, particularly as Component 2 focuses heavily on feasibility, modelling, design and prototypes. An explicit Theory of Change diagram is also missing, Component 2 appears dependent on the FCDO-funded pilot, and the Programme Justification section lacks sufficient measurable targets.

CAR1: Please strengthen the description of the concrete adaptation actions and their expected scale, including, the indicative number of shelters/households to benefit, the scale and location of drainage and nature-based interventions, and other measurable physical adaptation results. Please clarify how the project moves from prototype testing to substantial deployment during the AF implementation period.

CR4: Given that Component 2 is explicitly sequenced to build on the results of the FCDO-funded pilot, please clarify how implementation of the AF-financed activities would proceed if the pilot is delayed, produces inconclusive results, or identifies technical or economic constraints to scaling.

CAR2: Kindly include, under Part I.A, the Theory of Change (and its diagram) to clearly illustrate how the proposed interventions will lead to the intended long-term change, the assumptions being made, the potential constraints, the required inputs and how they link to the project components.

- Theory of Change statement/narrative should use the form of “‘IF’ ‘THEN’” statements. This would clearly state how the project activities would lead to substantial tangible outcomes.

Please also ensure it aligns with the list of outputs and outcomes in Project/Programme Justification section

CAR3: Please explicitly demonstrate how the project supports one or more relevant Adaptation Fund Strategic Objectives.

CR5: Note the Section titled “Programme objectives has information that should be placed in other sections of the proposal such as beneficiaries targets etc. Please revise Project components section accordingly

Does the project / programme provide economic, social and environmental 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?

Response: Pending

Secretariat: Yes. However further information is required.

Part II, pages 30-31 of the proposal describe expected benefits qualitatively and identifies vulnerable groups explicitly and links interventions to benefits. It does not indicate the number of indirect and direct beneficiaries that will be reached. Several safeguard issues have been identified and measures to avoid or mitigate potential impacts, including maladaptation. However, the project focuses more on what it intends to do instead of demonstrating the process for persons to receive benefits. It also has an initial gender assessment as an Annex. The narrative does not demonstrate equitable benefit distribution.

CAR4: Please quantify the expected economic, social and environmental benefits wherever possible. This could include, for example, the number of people/households benefiting from climate-resilient shelter, employment and training benefits, beneficiaries of climate-informed planning and drainage measures, and relevant ecosystem restoration targets and expected results. When exact figures are not available, kindly include reasonable estimates or proxies to support the identified project's impact alongside a brief explanation of the method used for these calculations.

CAR5: Please provide estimates of the number of direct and indirect beneficiaries, disaggregate by male and female, refuge/host community status. Elsewhere in the proposal notes, an estimated 1,000 vulnerable households benefiting from climate-resilient shelters (pending confirmation by feasibility study)

CAR6: Please elaborate on how the beneficiary selection criteria will ensure equitable access to project benefits by most vulnerable households. Please indicate the rationale for limited benefits to registered refugees and households of two or more persons. Notable the criterion of 'household of two or more people' could exclude highly vulnerable single-person households.

CR6: Please ensure that the risk identified as also noted in the Section on Environmental and Social Risks. An initial gender assessment is provided but includes little information. Please ensure that the initial gender assessment focuses on the following:

- climate vulnerabilities and impacts experienced by women and men;
- roles and responsibilities;
- access to/control over land, shelter, resources, employment and decision-making;
- adaptive capacities;
- barriers to participation;
- gender-based violence/protection risks;
- differentiated knowledge and priorities;
- implications of the proposed interventions for gender relations.

Is the project / programme cost effective?

Response: Pending

Secretariat: Yes.

As per Part II, (pages 32-33), the concept note presents a qualitative case for cost-effectiveness, including the advantages of anticipatory adaptation action over repeated emergency response and measures to support long-

term sustainability. However, the cost-effectiveness analysis would benefit from further work. For example, (i) the estimated savings and benefits are stated but evidence should be provided and (ii) the comparison with alternative adaptation options is mainly qualitative and should be strengthened.

CAR7: Please briefly describe the main feasible alternative approaches considered and briefly explain why the proposed approach is considered the most cost-effective and sustainable option for achieving the intended adaptation results. The use of a table may assist with the comparisons

CAR8: Please provide the basis or source for the quantitative cost and benefit estimates presented, including avoided relocation and healthcare costs, temperature reductions and avoided repair costs. If robust estimates are not yet available, please qualify or revise these claims accordingly or note further qualification will be undertaken in the PFG phase.

CAR9: Please further clarify qualitatively how the selected approach is expected to remain cost-effective from a sustainability perspective, including how the use of local materials, maintainable technologies and existing institutional arrangements is expected to reduce recurrent costs and sustain benefits beyond the project period.

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?

Response: Pending

Secretariat: Yes.

As per Part II, the concept references the NAP, NDC and NSDS as well as other relevant plans/programme documents.

CR7: Kindly clarify the years of implementation of each strategy/ plan or the year completed if the period is not documented.

CR8: Please also briefly state the goal/objective of the strategy/plan and in explaining the relevance, please include the project's alignment to the strategy. A suggested structure could be: 'The proposed project is aligned with [Plan XX], under [Specific Action XX], contributing to [Outcome XX].'"

Does the project / programme meet the relevant national technical standards, where applicable, in compliance with the Environmental and Social Policy of the Fund?

Response: Pending

Secretariat: Yes.

However further information is required.

CR9: Please remove the list of climate change policies as these were reflected in the previous section. Please provide a list of each regulation/standard without combining them. Please reflect on Component 2 for the appropriate standards.

CR10: Please ensure the competent authorities are identified for each standard listed, as well as the steps involved.

Is there duplication of project / programme with other funding sources?

Response: Pending

Secretariat: Unsure.

As per pages 21-22, the proposal notes past projects but the list needs to be more comprehensive. One project, FCDO-initiative will be scaled up via the AF project.

CR11: Kindly include a comprehensive table listing of all projects that are or have been implemented in Chad and are related or complementary to the proposed project. For each, please include the following details in the table:

- (i) Project title, Donors/Funding Entity
- (ii) Main project interventions,
- (iii) Timeline and specific location within the country,
- (iv) Target population,
- (v) Implementing entity,
- (vi) Lessons learned (if applicable)
- (vii) Overlaps and synergies with the proposed project, including how proposed project will build upon an existing or previous project

Does the project / programme have a learning and knowledge management component to capture and feedback lessons?

Response: Pending

Secretariat: Yes.

However, further information is needed.

The proposal addresses knowledge management and dissemination of lessons learned. However further adjustments are needed, especially given there is no explicit knowledge management section

CAR10: Please make the KM activities more explicit by a dedicated component (Component 4) which encapsulates all knowledge management and learning across the project with a budget line.

CR12: Please specify:

- i. how frequently the experiences and lessons gained will be documented and tracked (monthly, quarterly etc)
- ii. how will the project systematically assess what works, for whom and under what conditions, and at what cost
- iii. who will be responsible for tracking the experiences gained, how this will be done, and when the tracking will take place (e.g. an M&E Officer/ Knowledge Management Officer in the Project Management Unit).
- iv. how the knowledge generated will be sustained after the project concludes. For example, who will be responsible for managing and maintaining the digital knowledge repository or does a repository already exist.

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?

Response: Pending

Secretariat: Yes.

As per the Initial Consultation Report, a list of stakeholder consultations was convened in the country. However, the engagement appears to be mostly with government agencies for endorsement. Some engagement should be also at the community level to guide further engagement at that level. Though engagement was with government, the Ministry responsible for gender was not part of the process nor those stakeholders with a gender remit.

1. Please indicate engagement with stakeholders at the community level and those to help add gender lens.
2. Please indicate how these agencies' feedback will be incorporated in the process.

Is the requested financing justified on the basis of full cost of adaptation reasoning?

Response: Pending

Secretariat: No.

As per pages 40-41, the proposal reviews the baseline scenario, alternative (without project financing) scenario, and additionality of proposed interventions including those that could be considered business-as-usual activities. However, the intervention is mainly compared to a humanitarian baseline. Therefore, it is unclear whether AF outputs and outcomes will be achievable if other funding does not materialize. The current justification reads as though AF resources will be financing loss and damage rather than forward-looking adaptation and resilience building. Additionally, the concept has not explicitly stated whether or not the project will depend on co-financing or on the successful implementation of other donor-funded projects to deliver its outputs and outcomes.

CR13: Please clarify if co-financing or parallel financing is envisaged for the project. If so, please clarify if the project is designed to deliver its intended outputs and outcomes independently of such financing. Please confirm that the AF-financed activities, taken on their own, are sufficient to deliver the proposed adaptation results.

CAR11: Please strengthen the full cost of adaptation reasoning by clearly demonstrating that Adaptation Fund resources will finance the measures required to shift the targeted communities from business-as-usual development or humanitarian interventions a climate-resilient pathway. Some activities that can be considered as business-as usual include tree planting, capacity building, and local production of construction materials, and these should be justified in terms of how they address the climate hazards and vulnerabilities and therefore contribute to the overall adaptation objectives.

CAR12: Please revise the reference to "climate-induced loss and damage" so that the funding rationale is framed mainly in terms of forward looking adaptation and resilience building.

CR14: Please clarify to the extent possible at this concept note stage, the climate resilient parameters that will guide the proposed shelter solutions, including the climate hazards and other requirements that the designs are expected to address. Given the feasibility study will identify, test, and validate climate-adapted shelter solutions suited to the Sahelian context, the concept note should provide adequate information to prove the climate adaptation rationale.

Is the project / program aligned with AF's results framework?

Response: Pending

Secretariat: No.

As per Part III, page 46, the concept note provides the project alignment with the Results Framework of the Adaptation Fund. However, it needs to be revised to ensure consistency with the new template:

https://www.adaptation-fund.org/wp-content/uploads/2026/04/AF-SRF-Updated-templates_results-framework-table-and-results-framework-alignment-table.pdf

CAR13: Please comply with the template for the SRF Alignment Table.

CAR14: Please re-examine the Outcomes and Outputs. Output 7 is listed but the corresponding Outcome 7 is not. Please also ensure that the exact wording for the Fund Output and Outcome statements are used as per the guidance.

CR15: Please include a narrative on alignment with Strategic Results Framework Outcomes.

Has the sustainability of the project/programme outcomes been taken into account when designing the project?

Response: Pending

Secretariat: Yes.

As per Part II, page 42, the proposal addresses some key areas of sustainability (economic, social, environmental and institutional). However, the section focuses mainly on the intended sustainability of intervention, but some arrangements are not adequately explained. For example, financial sustainability, note that economic and financial sustainability are not the same

- i. Please elaborate on how adaptation benefits will be sustained after the project ends by outlining initial arrangements across the key sustainability areas. This should include how successful approaches will be replicated and/or scaled up; any initial arrangements for operational and maintenance of infrastructure; how capacities will be sustained; and arrangements.
- ii. For financial sustainability, please at least indicate the likely mechanism or sources that would support operation and maintenance and other post-project costs (i.e. recurrent budget allocations, revenue from cooperatives etc)

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?

Response: Pending

Secretariat: Yes.

However further information is required.

As per pages 42-45, the proposal provides preliminary environmental and social screening against the 15 Environmental and Social Principles. While several relevant potential risks have been identified, some foreseeable risks could be more clearly reflected and the conclusions further substantiated to support the

preliminary risk categorization. Given that some project sites and/or interventions remain to be identified or further defined, please clarify whether the project includes any Unidentified Sub-Projects (USPs) under the Adaptation Fund's relevant guidance and, if so, how their environmental and social risks will be screened and managed.

CAR15: Please indicate the environmental and social risk category (Category A, B or C) assigned to the project based on the preliminary screening, in accordance with the Adaptation Fund Environmental and Social Policy. Please ensure that the classification reflects the AF ESP classification criteria rather than solely the Implementing Entity's own environmental and social safeguard system

CAR16: Please use the ESP screening checklist table provided in the application. Please review the ESP screening table for consistency and clearly indicate whether further assessment is required for each of the 15 principles. In several instances, including Compliance with the Law, Human Rights and Climate Change, the proposal indicates that no further assessment is required while simultaneously identifying potential risks.

In several instances, including Compliance with the Law, Human Rights and Climate Change, the proposal identifies potential risks while simultaneously indicating that no further assessment is required. Please reconcile these entries and ensure that the determination regarding further assessment is consistent with the risks identified. Please note that Adaptation Fund Principles 1, 4 and 6 apply to all projects

CAR17: Please strengthen the preliminary environmental and social screening by identifying foreseeable risks sufficiently to support the project categorization. The assessment should consider potential direct, indirect, cumulative and transboundary impacts and risks associated with the proposed interventions. The tables should clearly:

- identify the specific potential impact or risk;
- indicate whether the risk is low, medium or high and provide the basis for that rating;
- identify relevant avoidance, preventive or mitigation measures; and
- explain how the risk and mitigation measures will be monitored during implementation.

Where no material risk is anticipated, please state "no risk" and provide an appropriate justification.

For consistency, risks may be framed as: "There is a risk of..." For example,

"There is a low/medium/high risk that [specific impact] may occur as a result of [activity or causal pathway]. The risk is considered low/medium/high because [justification]. To minimize the risk, the project will avoid/prohibit [relevant practices] and implement preventive and mitigation measures including [measures]. Compliance with these measures will be monitored through [monitoring mechanism] throughout project implementation."

CAR18: Please complete the screening under Principle 7 (Indigenous Peoples), clearly indicating whether the principle is applicable in the project context and providing the basis for this determination

CAR19: Please include a clear statement confirming that project implementation will comply with the Adaptation Fund Environmental and Social Policy and Gender Policy, including the application of appropriate environmental, social and gender risk-management measures throughout implementation.

CAR20: Please clarify whether any project activities would constitute Unidentified Sub-Projects (USPs) under the Adaptation Fund's USP guidance. If USPs are anticipated, please identify the relevant activities and explain how the applicable requirements of the Adaptation Fund Environmental and Social Policy and Gender Policy will be applied as the sites and activities are subsequently identified and assessed.

CAR21: Please also correct the statement under Involuntary Resettlement that site selection will "prioritize

exposure to climate hazards,” which appears intended to state that site selection will avoid or minimize exposure to climate hazards.

Resource Availability

Is the requested project / programme funding within the cap of the country?

Response: Cleared

Secretariat: Yes

Is the Implementing Entity Management Fee at or below 8.5 per cent of the total project/programme budget before the fee?

Response: Pending

Secretariat: Yes. The Implementing Entity Management Fee is at 8.5% for single country project. The PFG budget is within range for a project size US\$5M and above

CR16: Regarding the PFG, please confirm if UN-HABITAT will be responsible for the PFG. If so, please remove UNHCR under EE as their involvement applies to the proposal and not PFG.

CR17: Please clarify why one field mission is adequate for the gender assessment and gender action plan. Please elaborate the target for the field mission under Activity 4

Please clarify “Project management and IE coordination” and “Project support costs” at 7%. Please note that the IE fee for the PFG should be no more than 8.5% of the total PFG.

Are the Project/Programme Execution Costs at or below 9.5 per cent of the total project/programme budget (including the fee)?

Response: Pending

Secretariat: Yes. The Project Execution Costs are at 8.7%.

CAR22: Please note that UN-HABITAT and UNHCR are the Executing Entities. Given the IE is serving as an EE, the limit for execution is 1.5%. Please provide justification as to why the IE is serving as an EE.

CR18: Please note that the Components and Financing Table should break down cost by project output

Eligibility of IE

Is the project/programme submitted through an eligible Implementing Entity that has been accredited by the Board?

Response: Pending

Secretariat: Yes. The IE (UN-HABITAT) is listed as accredited and the accreditation expired on 30 October 2027.



ADAPTATION FUND

CONCEPT NOTE PROPOSAL FOR SINGLE COUNTRY

Title of Programme : Enhancing climate resilience of displacement affected communities in Chad

Country: Chad

Thematic Focal Area:

- x Urban resilience
- x Disaster risk reduction
- x Water resources management
- x Rural livelihoods

Type of Implementing Entity: Multilateral Implementing Entity

Implementing Entity: UN-Habitat

Executing Entities: UN-Habitat & UNHCR

Amount of Financing Requested: USD 10 000 000 (in U.S Dollars Equivalent)

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

Amount of Requested financing for PFG: 150 000 (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.

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PART I. PROGRAMME INFORMATION

1.1. Programme Background and Context

This programme responds to the convergence of three mutually reinforcing dynamics in eastern Chad that are driving increasing climate vulnerability and undermining the adaptive capacity of affected populations: (i) the rapid intensification of climate hazards (extreme heat, prolonged droughts, floods, and erosion), (ii) the unprecedented scale of forced displacement and the rapid — often unplanned — growth of human settlements hosting refugees and host communities in areas already among the most climate-stressed in the region, and (iii) structural deficits in basic infrastructure, territorial planning, and institutional capacities. Together, these pressures are eroding the coping and adaptive capacities of communities and local institutions, already resulting in recurrent asset losses, disruptions to essential services, and an increased risk of secondary displacement, threatening the long-term resilience of local and national development trajectories and locking in patterns of vulnerability that are difficult and costly to address ex post (maladaptation).

The programme will build the climate resilience of communities and systems and primarily focus on the provinces of Wadi Fira and/or Ouaddaï, with indicative targeting of the most climate-exposed settlement systems — notably around Guéréda and/or a locality in Ouaddaï (Farchana or Hadjer Hadid) — subject to technical confirmation during the feasibility study. The proposed interventions have been designed to directly reduce climate risk, strengthen adaptive capacity, and prevent the lock-in of maladaptive outcomes in line with the Adaptation Fund's mandate and investment criteria.

1.1.1. Context of combined pressures: ecosystem fragility in eastern Chad, climate impacts of forced displacement, and structural vulnerabilities

Indicator	Projection Year	SSP2-4.5	SSP5-8.5	Note
Temperature increase (vs. pre-industrial)	2050	+1.5 – 2.5°C	+2.5 – 3.5°C	National Chad; eastern regions trend above average IPCC AR6
Temperature increase	2100	+2.7°C (global)	+4.4°C (global)	
Annual precipitation	2040–2059	+30–50%	+30–50%	High interannual variability; trend uncertain
Frequency of heavy rainfall events	2050+	Increase	Strong increase	Heightened flood and erosion risk
Heatwaves	2050+	Intensification	Strong intensification	Number of days >35°C rises significantly
Droughts	2050+	Elevated risk	Strongly elevated risk	Particularly northern and central Chad

Figure 1 Projected climate changes for Chad under SSP2-4.5 and SSP5-8.5 scenarios (CMIP6 multi-model ensemble). Sources: World Bank Climate Change Knowledge Portal (2024); RCCC Climate Fact Sheet Chad (2024); IPCC AR6, Gutiérrez et al. (2021), Seneviratne et al. (2021). Note: sub-national data for eastern Chad (Wadi Fira/Ouaddaï) not separately available; national figures applied with upward adjustment reflecting faster-than-average warming in the Sahel zone.

Climate and environmental context: intensification of hazards and ecosystem fragility

Chad is a landlocked country in north-central Africa characterized by pronounced structural aridity — approximately 63% of its territory is arid and nearly 75% is desert or semi-desert — as well as highly fragile ecosystems. It ranks among the most climate-vulnerable countries globally, with an ND-GAIN score of around 27.4 (vulnerability: 0.640; readiness: 0.187), a very low position on the Human Development Index, and 4th place on the INFORM Risk Index (mid-2025). This extreme intersectional vulnerability stems from the combination of a rapidly warming climate (observed increase of approximately +0.5°C to +1.7°C since the 1970s, with temperatures regularly exceeding

40°C), a high dependence on rainfed agriculture (≈77% of employment and ≈23% of GDP), and limited institutional and community adaptive capacity.

Hydrological pressures reinforce this trend: Lake Chad has lost up to 90–95% of its historical surface area (from ~25,000 km² to <3,000 km²) between 1963 and 1990, while per capita water availability could decline by approximately 75% by 2080, exacerbating risks of water stress, food insecurity, and resource-based conflicts. In this already constrained context, interannual rainfall variability reaches around 30%, making agropastoral systems and the communities dependent on them particularly sensitive to climate shocks.

Climate projections (SSP2-4.5 and SSP5-8.5 scenarios) indicate a clear intensification of risks in the coming decades, with additional temperature increases of between +1.5°C and +3.5°C by 2050. Rainy seasons are expected to become shorter and more erratic, while the southward shift of approximately 180 km in Sahelian isohyets observed in recent decades illustrates the rapid transformation of agro-ecological zones. At the same time, the expected increase in intense rainfall events, combined with prolonged dry spells, is heightening both drought and flood risks.

This combination — more concentrated rainfall and extended dry periods with more frequent and prolonged extreme heat stress, flood events, and water scarcity — accelerates topsoil, riverbank and wind erosion, land degradation, runoff, and sedimentation, undermining the sustainability of human settlements, infrastructure, basic service provision, and agropastoral livelihoods, particularly in Eastern Chad where climate-resilient services remain highly limited. Recent extreme events illustrate this trend: floods in 2022 affected over 1.06 million people nationwide, while the exceptional floods of 2024 impacted around 1.9 million people, with significant damage to shelter, infrastructure, and service continuity, as well as livelihoods. In 2025, an estimated 7.8 million people in Chad needed humanitarian assistance, up from 6 million in 2024, driven in part by cumulative flood impacts on food security and livelihoods.

Operationally, the intensification of hazards is already resulting in increased direct damage to shelters and community infrastructure such as schools, health centers, latrines, water points and community centers disruptions in access to basic commodity and agricultural markets and essential services, and heightened health risks when floodwaters mix with wastewater in contexts of limited sanitation. Without structural investments in territorial planning and climate-resilient infrastructure, these dynamics are expected to further increase exposure and vulnerability in rapidly urbanizing host areas in eastern Chad, including Adré and Farchana (Ouaddaï), Goz Beïda and Koukou Angarana (Sila), Tiné (Wadi Fira), and Oure Cassoni (Ennedi Est)..

Year	Event	People Affected	Deaths	Estimated (USD)	Damages
2013	Floods (nationwide)	~80,000	20+	N/A	
2019	Severe floods	~170,000	30+	N/A	
2020	Major floods (Sahel belt incl. N'Djamena)	388,000+	44	~67 million	
2022	Historic floods (nationwide)	1,000,000+	22+	170+ million	
2024	Exceptional floods	1.9 million+	300+ (regional est.)	Significant	
2025	Seasonal floods (multiple provinces)	~440,000+	22+ (reported)	Significant local damage	

Figure 2. Major flood events in Chad and their humanitarian impact (2013–2025) - Source : OCHA, ACAPS, EM-DAT, IFRC[

Social context: forced displacement, rapid settlement growth and different vulnerabilities

Flood frequency and severity in Chad have escalated sharply over the past decade. Between 2008 and 2024, floods triggered approximately 2.3 million internal displacements across 39 recorded events, confirming the recurrent and increasingly severe nature of this climate risk. As shown in Figure 2, the number of people affected grew roughly 25-fold between 2013 and 2024 — from ~80,000 to 1.9 million — with a marked inflection point after 2019, when

the 388,000 people affected by the 2020 Sahel belt floods were rapidly surpassed by the historic 2022 event (1 million+, \$170 million in damages) and then again eclipsed by the exceptional 2024 floods, which affected 1.9 million people and recorded over 300 deaths. The 2025 season, while less extreme, still affected ~440,000 people across multiple provinces, underlining that 2024 was not an isolated peak but part of a structural upward trend. Estimated damages, where available, similarly reflect this trajectory: from no reported figures before 2020 to \$67 million in 2020, \$170 million in 2022, and significant but unquantified losses in 2024 and 2025. This evolution confirms that floods are becoming both more frequent and more destructive, further intensifying humanitarian pressures and exacerbating the vulnerability of already exposed populations in high-risk, precarious areas such as Adré, Koukou Angarana, Tiné, and Oure Cassoni.

In recent years, climate shocks have multiplied, resulting in repeated losses to infrastructure, shelter, and livelihoods, with high costs for response, repair, and recovery. Flooding in particular, has led to cycles of damage and rehabilitation that absorb limited resources and reduce the capacity of authorities and communities to invest in responsive and sustainable solutions. Eastern Chad illustrates particularly acutely the convergence between climate shocks and forced displacement. Beyond economic loss and damage, climate shocks in eastern Chad have generated acute non-economic loss and damage: the erosion of community protection mechanisms, breakdown of traditional social support systems, loss of legal identity and documentation, and threats to safety and dignity. These irreversible impacts undermine social cohesion and prospects for durable solutions in displacement-affected areas.

Since April 2023, the National Commission for the Reception and Reintegration of Refugees and Returnees (CNARR — Chad's national body responsible for managing refugees, returnees, and asylum seekers) and UNHCR have been monitoring and assisting an influx of Sudanese refugees and Chadian returnees arriving in the provinces of Ouaddaï, Sila, Wadi Fira, and Ennedi Est. This displacement crisis is unfolding in landscapes already severely weakened by climate stress, where ecosystems, infrastructure, and livelihoods have been progressively eroded by decades of recurrent shocks.

Today, these regions currently host more than 1.3 million Sudanese refugees — approximately one in three people in the area — spread across 37 sites and host villages. While part of this population has been present since 2003, the escalation of conflict in Sudan since April 2023 has triggered a massive additional influx, arriving into areas with sharply diminished adaptive capacity, placing unprecedented pressure on already degraded ecosystems, overstretched social services, and undersized infrastructure. Humanitarian agencies are supporting the Chadian government and local authorities in providing life-saving assistance and protection services. The government and UNHCR have supported 67% of refugees to relocate from spontaneous arrival sites to newly established camps, where displaced populations can access services provided by humanitarian teams.

This influx is accelerating environmental degradation in areas already at the limit of their carrying capacity — depleting fuelwood resources, intensifying land degradation, and generating rapid, unplanned settlement expansion that leaves communities increasingly exposed to climate hazards. According to operational data from UNHCR and CNARR, the demographic profile of this population is heavily skewed toward women and children, who represent approximately 86% of new arrivals. Approximately 25% of refugee households in Eastern Chad are women-led (female-headed) households, reflecting displacement patterns marked by high levels of social and economic vulnerability. A significant proportion — estimated at around 13% — has specific protection needs, including unaccompanied or separated children, persons with disabilities, pregnant women, individuals with chronic or severe illnesses, and households lacking civil documentation. Humanitarian assessments also highlight concerning levels of malnutrition among children upon arrival, heightened risks of gender-based violence, and very limited access to essential services such as healthcare, water and sanitation, education, and protection. These pre-existing vulnerabilities are compounded by climate exposure: populations with the highest protection needs are simultaneously those with the least capacity to anticipate, absorb, and recover from climate shocks.

This combination of high demographic dependency, elevated protection needs, and increasing pressure on territories already exposed to climate hazards significantly exacerbates the vulnerability of host areas in eastern Chad and reinforces the need for structural investments in adaptation and resilience. Eastern Chad is simultaneously experiencing more frequent and intense rainfall events leading to flash flooding that destroys crops,

damages shelter, and cuts off access routes — disproportionately stranding women, unaccompanied children, the elderly, and persons with disabilities who have the least mobility and fewest assets to fall back on — alongside prolonged dry spells and recurrent drought that desiccate pastures, reduce rain-fed harvests, and force women and girls to spend up to 6–8 hours daily collecting water from ever more distant points. These compounding climate stressors directly undermine the coping capacity of the 86% of new arrivals who are already women and children, and deepen the vulnerabilities of female-headed households, persons with disabilities, and others with specific protection needs — groups that are least able to absorb shocks and least represented in the decision-making structures that shape adaptation responses.

A large number of Sudanese refugees are currently hosted in informal camps across several border localities, with between 500 and 1,000 new arrivals per day reported in some areas. Conditions in these border locations are extremely challenging: settlements lack adequate shelter, safe water and sanitation infrastructure, exposing residents to waterborne disease and heat-related health risks. Protection risks are acute, particularly for women and girls who face heightened exposure to gender-based violence in the absence of adequate lighting, segregated facilities and functioning referral pathways. Children and youth have limited access to educational support, disrupting learning continuity and increasing vulnerability to exploitation and recruitment. The security situation remains relatively stable in most refugee-hosting areas of Eastern Chad, although there are localized security risks linked to cross-border dynamics, armed group activity in neighboring Sudan, criminality, and competition over scarce natural resources. There is no widespread conflict between refugees and host communities, but tensions do exist and are largely driven by competition over increasingly scarce resources, especially water, grazing land, agricultural land, and firewood. The rapid influx of Sudanese refugees has amplified these pressures in a context already affected by climate shocks, poverty, and weak service provision. Social cohesion remains relatively strong but cannot be taken for granted. Humanitarian assistance is declining.

The two main provinces mentioned in this proposal present distinct social contexts: Wadi Fira combines refugee-hosting pressures with longstanding inter-communal dynamics among host groups, while Ouaddaï's host-community composition differs and is shaped more by its position as the regional hub for the post-2023 Sudanese influx.

The relocation of all refugees currently present at the border remains complex, due in part to insufficient humanitarian funding. In some cases, it has not been possible to provide shelter to all households recently transferred to existing camps. Moreover, there is also the limited capacity of existing camps. Critically, existing and receiving camps have themselves been developed without adequate consideration of climate risk, meaning that relocation alone does not resolve underlying exposure to floods, heat stress, and water scarcity.

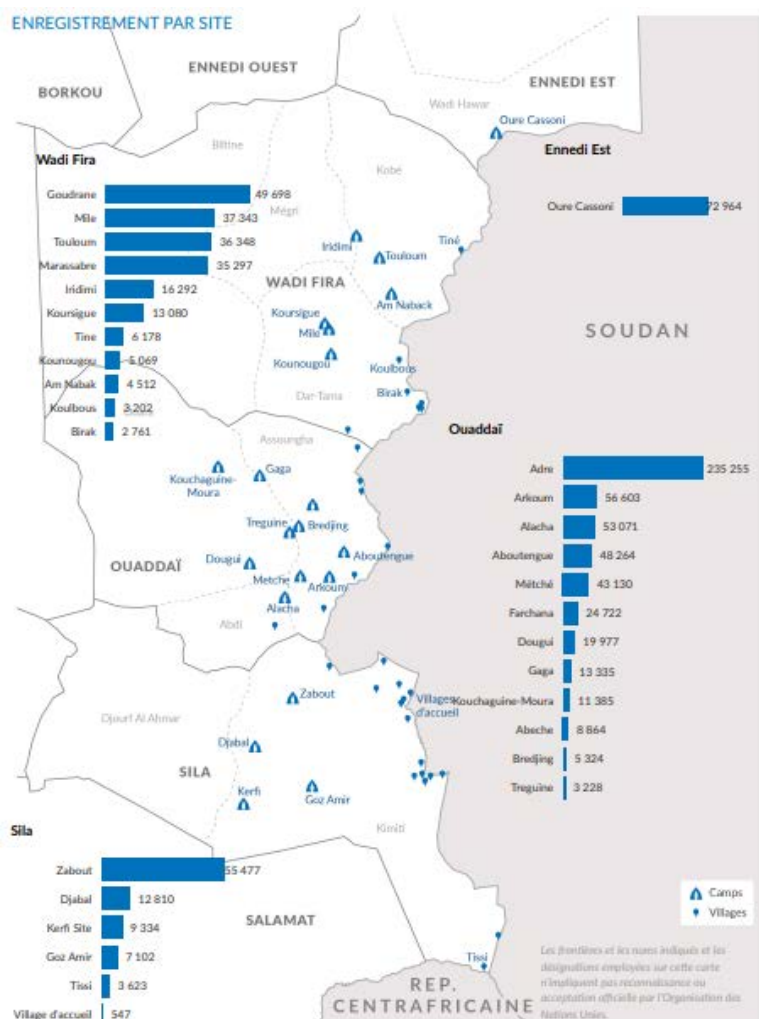


Figure 3 Refugee Registration by Site — Eastern Chad. The project will primarily focus on the provinces of Wadi Fira and/or Ouaddaï, with indicative operational targeting around Guéréda and/or selected localities in Ouaddaï (notably Farchana or Hadjer Hadid), subject to technical confirmation during the feasibility study.

Economic development context: the cost of the “damage–repair” cycle

The economic and fiscal context significantly constrains investment capacity for adaptation. Available public resources are primarily absorbed by humanitarian response, post-shock rehabilitation, and basic needs, at the expense of more costly but more sustainable preventive investments.

In eastern Chad, these constraints are exacerbated by rapid urbanization linked to forced displacement. Climate shocks result in repeated cycles of damage and rehabilitation that absorb limited resources and reduce the ability of authorities and households to invest in durable solutions. In the absence of catalytic investments, this cycle tends to become self-reinforcing: infrastructure remains fragile, asset losses accumulate, and emergency response expenditures crowd out prevention spending, further weakening development trajectories.

With a growth rate of 3.2% in 2024 and projected at 3.4% in 2025, Chad has experienced two years of moderate growth, only slightly above population growth rates. As a result, GDP per capita has remained broadly stagnant at around USD 1,000 per year. Human development indicators remain very low, with approximately 35% of the

population living below the extreme poverty line, a life expectancy of 54 years, a literacy rate of 27.3%, and only 11.7% of the population having access to electricity in 2022. The economy remains heavily dependent on agriculture and oil production, making it vulnerable to external shocks and commodity price fluctuations. A stronger recovery is expected following the completion of the political transition and renewed engagement with international financial institutions.

Indicator	2016	2019	2020	2023	2024	2025 (proj.)
Real GDP growth (%)	-6.4	3.0	-1.6	3.5	3.2	3.4
Inflation (%)	-1.1	-1.0	3.5	4.1	3.2	3.0
Public debt (% GDP)	51	44	52	47	46	45
Current account (% GDP)	-7.4	-6.8	-4.5	-6.0	-5.8	-5.5

Figure 4 Chad — Key Macroeconomic Indicators, 2016–2025. Source : IMF World Economic Outlook (2024 update); World Bank Macro Poverty Outlook – Chad

The scale of this damage–repair cycle can be approximated using a small number of recent reference figures, though with important caveats. The 2022 floods — the worst in decades — affected more than 1.3 million people across 19 of Chad's 23 provinces, destroying over 350,000 hectares of crops, approximately 80,000 homes, and a significant number of schools and health facilities (CARE/OCHA, 2022). Chad's total humanitarian funding requirement for 2024 stood at approximately USD 738 million (OCHA HRP 2024), a substantial share of which covers climate-related needs. At the Sahel scale, the World Bank has estimated that climate shocks can cost between 2 and 4% of GDP annually in the region's most exposed countries (World Bank, *Adaptation Finance*, 2021). *Three caveats apply:* (i) a Chad-specific official estimate of annual damage–repair costs does not exist, due to the absence of systematic Post-Disaster Needs Assessments (PDNAs); (ii) humanitarian funding appeals are not a direct measure of climate damage alone, as they bundle conflict- and displacement-related needs alongside climate impacts; and (iii) Sahel-wide World Bank averages cannot be projected directly onto eastern Chad without sub-regional disaggregation.

1.1.2. Climate vulnerability in eastern Chad

UNHCR, in collaboration with CGIAR, conducted a climate vulnerability and risk analysis for Chad (April 2025). The maps below (figure 8 and 10) illustrate exposure to compound climate hazards, defined as the co-occurrence of extreme heatwaves, droughts, and floods. The results provide a strategic orientation tool, to be further refined through operational validation and more detailed site-level analyses during project preparation.

The geospatial layer of settlements includes only formal and informal sites of refugees and internally displaced persons (IDPs); other types of locations are not represented. The data are drawn from UNHCR's global public GIS database and were confirmed by colleagues in the Regional Bureau as the most up to date at the time of attachment (April 2025). However, they have not yet undergone full validation by country operations and should therefore be interpreted as indicative for strategic planning purposes.

For Chad, the analysis highlights already high and rapidly increasing exposure of displaced populations to compound climate hazards. To date, 43 refugee sites and 120 IDP sites are already exposed to severe hazard levels, defined as conditions approximately twice as intense or up to ten times more frequent than moderate compound hazard levels.

In practical terms, this includes more than 30 days per year exceeding the threshold of potentially lethal heat (heat index > 41°C), combined with recurrent drought and flood stress.

Refugee sites (formal and informal settlements) exposed to climate-related hazards across Chad - Baseline & by 2040

	Compound		Extreme heat		Drought		Floods	
	Baseline	Future	Baseline	Future	Baseline	Future	Baseline	Future
Extreme	0	80	1	84	0	0	0	0
Severe	43	18	22	14	0	98	0	0
High	55	0	75	0	26	0	25	47
Moderate	0	0	0	0	72	0	73	51
Low	0	0	0	0	0	0	0	0

Figure 5 Refugee sites (formal and informal settlements) exposed to climate-related hazards across Chad. Baseline & by 2040. Source: CGIAR.

By 2040, projections indicate a marked deterioration in the risk profile, with 80 refugee sites and 120 IDP sites potentially exposed to extreme hazard levels. Under this scenario, compound hazards could become approximately three times more intense or up to twenty times more frequent than moderate conditions. Operationally, this would translate into widespread and severe crop and pasture losses, acute water shortages in reservoirs and wells, increased flash and river flooding with high risks of soil erosion, and more than 54 days per year exceeding the potentially lethal heat threshold ($HI > 41^{\circ}\text{C}$). These trends underscore the urgent need to integrate territorial planning and climate-resilient services into the development of host areas in eastern Chad.

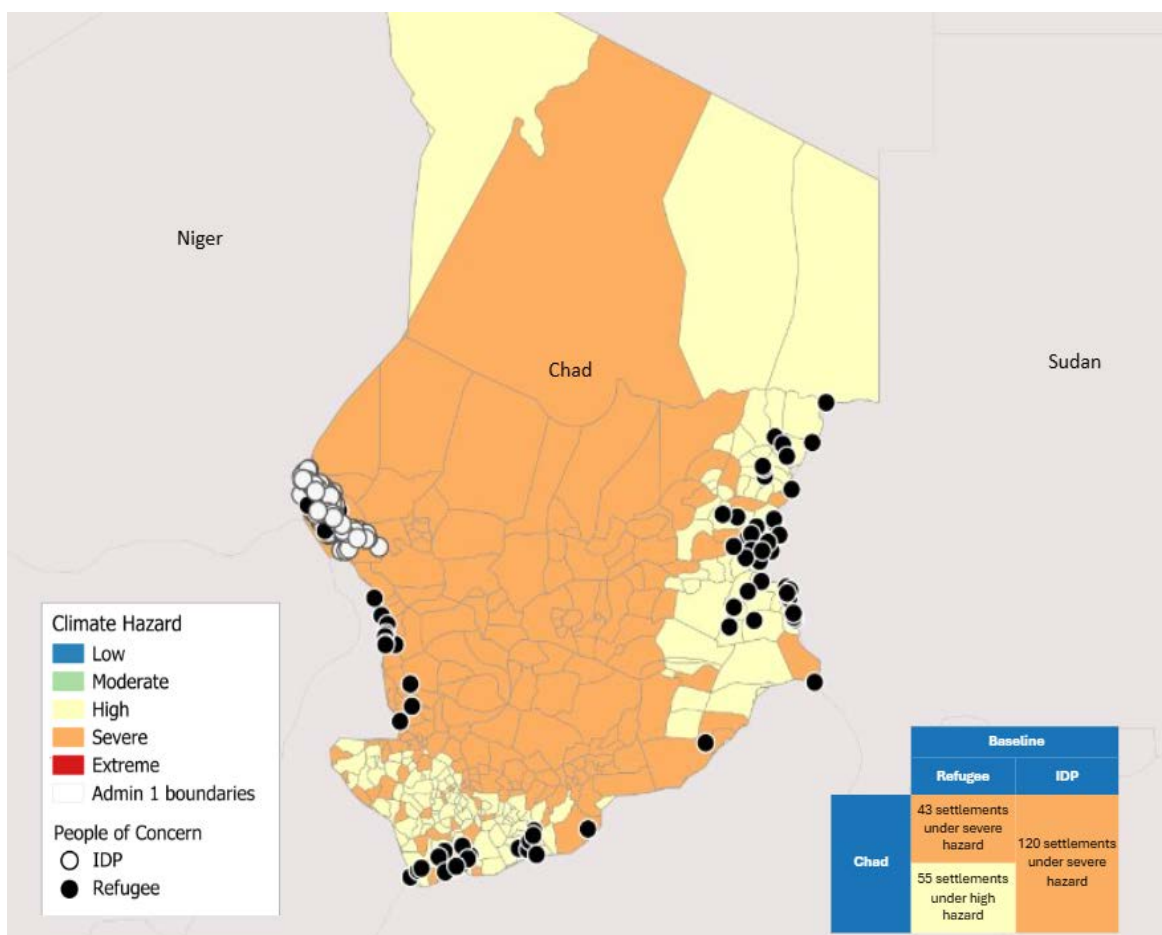


Figure 6 Climate hazards in Eastern Chad - Source: UNHCR / CGIAR.

Without anticipatory action and transformative investments, the growing exposure of refugee and IDP sites to compound hazards is likely to lead to a significant increase in livelihood losses, secondary displacement, and recurrent humanitarian costs. There is therefore an urgent need to shift from reactive crisis management to an integrated approach to climate and territorial resilience in eastern Chad.

Sensitivity and Adaptive Capacity: the Vulnerability Dimension

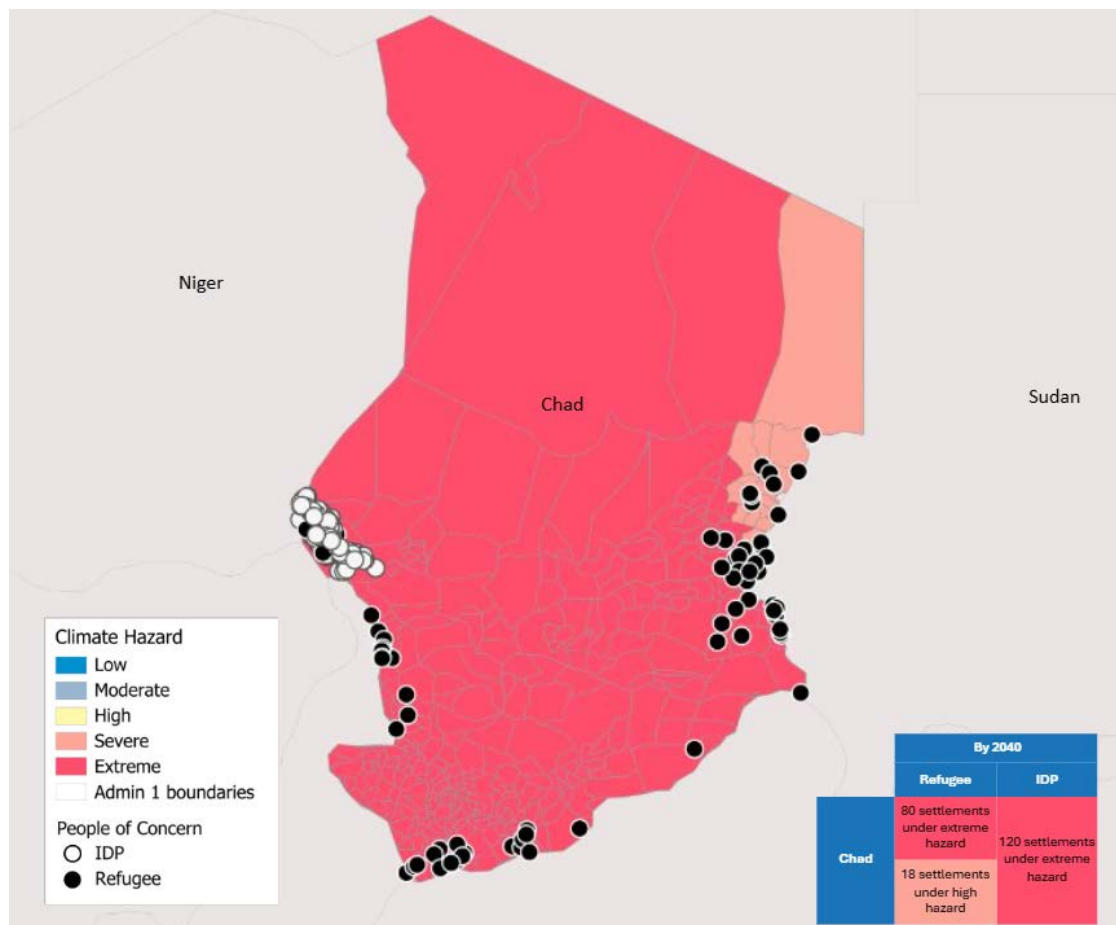
Hazard exposure, while severe, tells only part of the story. Following the IPCC AR6 risk framework, climate risk is a function of hazard, exposure, and vulnerability — where vulnerability itself reflects the sensitivity of a system to climate stresses and its (lack of) adaptive capacity. Critically, vulnerability in this sense is intrinsic and systemic: it is a condition of the population and territory, independent of the specific hazard location. In eastern Chad, the sensitivity of both refugee and host communities to climate shocks is exceptionally high across four interlocking dimensions.

- **Socio-economic fragility.** Approximately 79.8% of Sudanese refugee households in Chad fall below the national poverty line, with 47.4% food-insecure and 72% lacking the economic capacity to meet basic needs (WFP/UNHCR JAM, 2021; World Bank ECOSIT 4). At national level, some 35% of the population lives below the extreme poverty line, with GDP per capita stagnant at around USD 1,000 per year. These figures translate into near-zero financial buffers at household level: any climate shock — a failed harvest, a flood destroying shelter, a livestock loss — immediately pushes households into crisis without any capacity for self-financed recovery.

- **Service deficits.** Access to essential services in the eastern provinces is critically low even under normal conditions. Only 79% of refugees in the East have access to drinking water, at an average of 15 litres per person per day — well below the 20-litre Sphere standard and far below the over-90% coverage achieved in other parts of Chad (WFP/HCR 2021). Less than 2% of households in refugee-hosting areas have access to clean cooking energy. Health facilities are sparse, understaffed, and poorly supplied; patients in many localities must travel several kilometres for basic care, with road conditions deteriorating sharply during the rainy season (CARE, 2022). These pre-existing deficits mean that climate shocks — which damage infrastructure, contaminate water points, and disrupt supply chains — hit communities that are already operating at the margin of service access.
- **Livelihood dependence on climate-sensitive sectors.** The overwhelming majority of both refugee and host households depend on rain-fed subsistence agriculture, small livestock, and natural resource collection — activities that are directly and severely affected by the compound hazards identified above. Over 74% of employed women work in agriculture, nearly all in unprotected, rain-dependent subsistence production. Fewer than 30% of refugee households own livestock, and only 50% have access to land (World Bank, 2021). Drought-driven livestock losses and crop failures therefore translate almost immediately into food insecurity, asset depletion, and resort to negative coping strategies — including reduced meal frequency, sale of productive assets, and in extreme cases, secondary displacement.
- **Institutional constraints.** Local government capacity in the eastern provinces is severely limited, reflecting Chad's ranking of 190 out of 193 on the UNDP Human Development Index and a public administration that is heavily concentrated in the capital. Sub-national institutions responsible for water management, agricultural extension, disaster risk reduction, and territorial planning have very limited human, financial, and technical resources. Coordination between humanitarian and development actors remains fragmented, and the integration of climate risk into local planning instruments is nascent at best. As a result, the adaptive capacity of both public institutions and households — their ability to anticipate, absorb, and reorganise in response to climate change — is structurally constrained, regardless of the intensity of any individual hazard event.

Taken together, these four dimensions explain why eastern Chad is not merely highly exposed to climate hazards, but deeply vulnerable in the systemic sense: the capacity to cope with, adapt to, and recover from climate shocks is fundamentally compromised at every level — household, community, and institutional. This is the context in which the compound hazard projections shown in Figures 8 and 9 must be read.

Figure 7 Projected Climate Hazard Exposure of Refugee and IDP Settlements by 2040 — Chad



1.1.3. Structural deficits in territorial and urban planning: risk of maladaptation

In Wadi Fira and Ouaddaï — including the areas of Guéréda, Farchana, and Hadjer Hadid — the absence of climate-informed territorial planning constitutes a structural and self-reinforcing driver of growing vulnerability. Climate hazards in these areas are already severe and compounding: intensification of heatwaves, increasingly erratic and intense rainfall events, accelerated erosion, and recurrent flooding interact with rapid, largely unplanned settlement expansion to generate a risk landscape that is worsening with each construction cycle. In rapidly expanding urban and peri-urban areas, the spontaneous occupation of natural depressions, drainage corridors, and poorly drained zones significantly increases the exposure of households and infrastructure — not as an isolated failure of individual decisions, but as the systemic outcome of a planning vacuum in which neither local authorities nor communities have access to the information, tools, or institutional frameworks required to make risk-informed siting choices.

The causal chain driving this dynamic is straightforward but structurally entrenched. At the first link: climate and geospatial data — hazard maps, hydrological analyses, soil infiltration assessments, urban growth projections — are largely unavailable at the subnational level. Provincial and municipal authorities in Wadi Fira and Ouaddaï have neither the technical capacity to produce such data nor reliable access to national datasets that could inform their decisions. Despite the existence of national planning instruments (Urban Reference Plans, Provincial Land Use Plans), their operationalization at the local level remains minimal, and the integration of climate risk into siting decisions is the exception rather than the rule. At the second link: in the absence of risk-informed guidance, shelter, water infrastructure, community facilities, and service hubs are established where land is available and accessible — which in the context of displacement-driven rapid urbanization often means low-lying areas, natural drainage corridors, erosion-prone slopes, and zones with low soil infiltration capacity that concentrate runoff. Soil degradation and the loss of vegetative cover further reduce the landscape's capacity to absorb rainfall, amplifying flood peaks and accelerating the erosion of foundations, roads, and utility networks. At the third and most consequential link:

once infrastructure is established in high-risk locations, the costs of correction become prohibitive. Relocating households, rebuilding roads and drainage systems, and restoring degraded ecosystems after the fact require multiples of the investment that risk-informed planning would have cost upfront. Each successive climate shock — flood, heatwave, windstorm — generates repair and rehabilitation costs that absorb the limited resources of local authorities and humanitarian actors, leaving nothing for the preventive investment that would reduce future exposure. This is the mechanism of maladaptation: not a single wrong decision, but a self-reinforcing cycle in which the absence of anticipatory planning locks in recurring costs and structurally increases vulnerability over time.

This dynamic is particularly acute in the context of the post-2023 Sudanese refugee influx. The arrival of over 910,000 new refugees in eastern Chad since April 2023 has dramatically accelerated settlement expansion around existing towns and formal camp perimeters — situated, by the logic of displacement rather than risk assessment, in areas exposed to flash flooding, erosion, and extreme heat. The window for intervention is narrowing: every month of continued unplanned expansion consolidates informal settlement patterns that will be increasingly costly and socially disruptive to correct. Investing in climate-informed territorial planning now — before further consolidation occurs — is therefore not only a resilience measure but a cost-avoidance imperative of the first order.

The economic case is unambiguous. Available regional evidence indicates that climate shocks cost between 2 and 4% of GDP annually in the Sahel's most exposed countries, and that every dollar invested in anticipatory adaptation generates between 4 and 10 dollars in avoided losses. In eastern Chad, where the damage–repair cycle is already absorbing a substantial share of constrained public and humanitarian resources, the cost of inaction compounds annually. Anticipatory territorial planning — integrating multi-hazard risk mapping, climate-informed zoning, drainage design, and safe settlement area identification — is the most cost-effective available instrument to break this cycle, reduce future exposure, and protect the value of the public and humanitarian investments that have already been made in the region.

Table 1: Summary of reported effects of recent major flood events

Year	Affected population	Flooded land (ha)	Houses destroyed
2012	466,000 ^a - 613,631 ^e	255,000 ^a	96,000 ^a
2014	8,000 ^a	-	-
2019	171,000 ^a	18,000 ^a	2,700 ^a
2020	36,934 ^d - 388,000 ^a	150,000 ^a	-
2021	255,000 ^a - 269,180 ^d	-	-
2022	1,100,229 ^d - 1,426,948 ^b	465,030 ^b	80,000 ^b
2023	-	18,130 ^a	2,700 ^a
2024	1,945,674 ^d - 2,000,000 ^c	1,862,800 ^e	218,000 ^c

Source: Author's analysis based on data from ^a UNOCHA=United Nations Office for the Coordination of Humanitarian Affairs, ^b the Government of Chad, ^c ACAPS, ^d the EM-DAT database, and ^e the FAO=UN Food and Agriculture Organization.

Figure 8 : Summary of reported effects of recent major flood events. Source: UNOCHA.

1.1.4. Integrated territorial approach: a climate-adaptive strategy for socio-spatial integration in displacement-affected areas

With approximately 20 refugee camps currently operational in eastern Chad — several of which have recently expanded their capacity (sometimes up to 60,000 refugees per camp) — an approach primarily based on the creation of new camps is becoming increasingly risky for all stakeholders, particularly from the perspective of a sustainable and durable response. These camps are moreover sited in areas of high and growing climate exposure, meaning that without deliberate adaptation investment, their expansion compounds rather than reduces long-term vulnerability.

In this context, since 2023, the Government of Chad, in partnership with UN-Habitat and UNHCR, has been piloting an **integrated territorial approach** aimed at moving beyond isolated camp-based responses. This approach seeks to facilitate the progressive integration of refugees within existing territorial systems — including villages, secondary urban centers and priority development zones identified by the Government (such as agricultural areas, economic corridors and emerging urban hubs) — rather than concentrating populations in standalone camps disconnected from local economies and infrastructure.

Territorial planning experiences in Farchana city (Ouaddai Province) and Dar Tama county (Wadi Fira Province) have demonstrated that **spatial planning can provide a critical operational and climate-adaptive framework to organize, prioritize and sequence investments in displacement-affected areas**, moving beyond fragmented and reactive interventions. Rather than focusing solely on the location of refugee populations, this approach is grounded in a territorial reading of the area, integrating host communities, existing settlements, infrastructure networks and local economic dynamics.

UN-Habitat, in partnership with national and local authorities, has supported the development of integrated territorial planning frameworks that are **embedded within existing regulatory and institutional planning systems**. These include locally validated planning documents and coordination mechanisms aligned with national mandates on territorial planning and decentralization. As such, the approach does not create parallel systems but rather strengthens and operationalizes existing ones, providing a clear basis for decision-making and climate-sensitive investment prioritization.

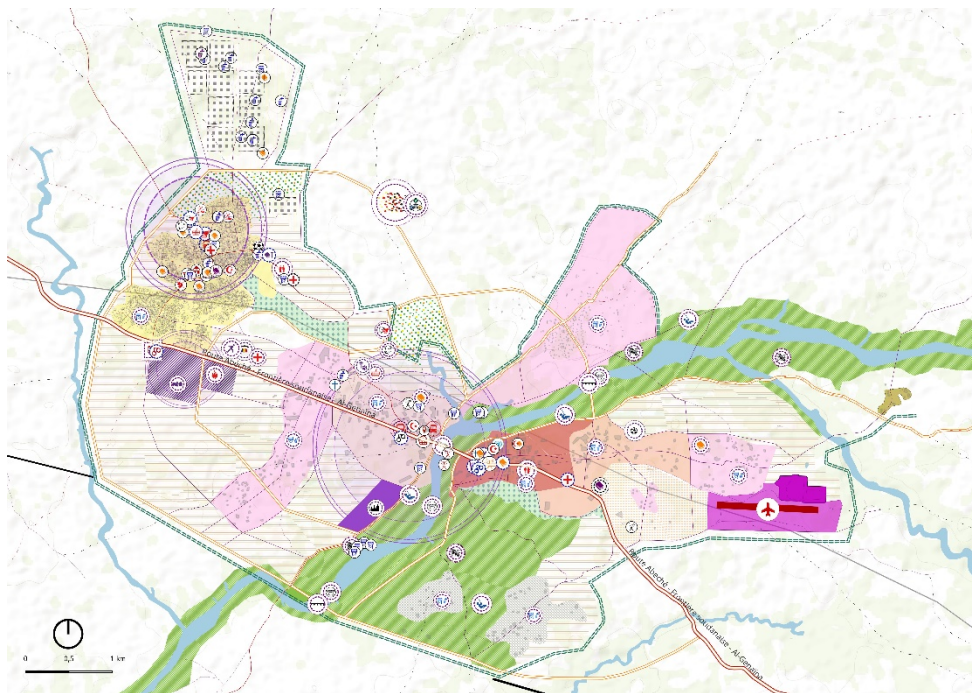


Figure 9 : Spatial Planning Overview — Refugee-Hosting Area of Land-Use and Service Coverage Map — Farchana Refugee-Hosting Area, Ouaddai Province, Eastern Chad – Source: UN-Habitat.

A key feature of this approach is its **operational orientation**. The planning frameworks developed in Farchana and Dar Tama are directly linked to the identification of **priority investment areas and concrete pilot projects**, such as markets, public spaces, service hubs or economic corridors, taking into account identified climate risks. These interventions are designed to act as climate-adaptive and low-cost demonstrators, showing how spatial planning can translate into tangible improvements while strengthening resilience to environmental stressors such as land degradation, water scarcity and heat exposure.

This is particularly relevant in the context of Chad's decentralization process, where local authorities are expected to play a central role in territorial development but often lack the tools, data and operational capacity to do so. By providing spatial data, planning frameworks and prioritized investment pipelines, this approach enables authorities to **better coordinate interventions, guide urban expansion, manage land and natural resources, and mobilize development partners around shared territorial priorities**.

At the same time, displacement-affected areas such as Farchana illustrate how camps and surrounding settlements are progressively integrating into broader urban and territorial systems. These dynamics call for a shift toward **area-based, climate-adaptive and investment-driven approaches**, where planning serves as a backbone to align humanitarian and development interventions, while reducing pressure on fragile ecosystems.

By anchoring investments in spatial planning frameworks and taking into account climate considerations, it becomes possible to ensure that interventions are **targeted, sequenced and mutually reinforcing**, improving access to services, supporting livelihoods and strengthening social cohesion, while also enhancing the resilience of both communities and territories to climate-related risks and building the long-term adaptive capacity of territories and communities facing escalating climate risk.

Ultimately, this integrated territorial approach provides a **scalable and climate adaptation-oriented model** to support durable solutions, by aligning displacement responses with territorial development strategies, strengthening local governance, and demonstrating how inclusive, resilient and spatially coherent systems can be built in fragile contexts.

1.1.5. Vulnerability of shelters, infrastructure, and environmental systems

In Wadi Fira and Ouaddaï, the predominant shelter typologies — light structures, moisture-sensitive materials, weak foundations, and an absence of stormwater management — are fundamentally unsuited to the Sahelian climate. They offer little protection against extreme heat, channel rather than absorb runoff during intense rainfall events, and degrade rapidly under repeated wet-dry cycles. Since April 2023, more than 102,981 emergency shelters have been constructed across nine new sites and twelve extensions, covering approximately 3,150 hectares — a scale of construction that, absent climate-resilient design standards, is actively locking in long-term vulnerability across the settlement landscape. This is precisely the gap that bioclimatic shelter solutions are designed to close: passive cooling through orientation and natural ventilation, elevated and flood-resistant foundations, and the use of thermally appropriate local materials directly address the structural weaknesses observed today.

The absence of durable shelter solutions has a compounding environmental cost. Reliance on temporary structures sustains continuous demand for construction wood and household fuelwood, accelerating deforestation and land degradation around settlement sites — degradation that in turn reduces soil infiltration capacity, increases surface runoff, and further elevates flood and erosion risk. This creates a self-reinforcing cycle in which inadequate shelter drives ecosystem loss, and ecosystem loss further undermines shelter resilience. Breaking this cycle requires pairing shelter upgrades with small-scale, site-level environmental interventions: vegetative shading and windbreaks to reduce thermal stress on dwellings, soil stabilization and contour planting to control erosion around settlement edges, and targeted reforestation to restore the vegetative cover that limits runoff and replenishes fuelwood sustainably. These nature-based measures are low-cost, can be implemented in parallel with shelter construction, and generate co-benefits for water retention, microclimate regulation, and reduced pressure on

remaining forest resources.

Basic infrastructure compounds these vulnerabilities at the settlement scale. Roads, drainage, water points, and community facilities in Wadi Fira and Ouaddaï are structurally under-dimensioned relative to rapid population growth; intense rainfall produces pluvial flooding and wadi overflows that damage unpaved roads, cut off access routes, and inundate poorly drained zones. Addressing this requires site-level drainage improvements and small-scale water management works — channeling runoff away from shelters, stabilizing drainage corridors with vegetation, and reducing the standing water that damages foundations and breeds disease vectors — integrated directly into the design of shelter sites rather than treated as a separate infrastructure problem.

1.1.6. Strategic alignment and rationale for the programme's integrated approach

The programme is embedded in a favorable strategic environment, aligned with Chad Connection 2030 (resilient infrastructure, territorial planning) and with Chad's commitments at the Global Refugee Forum, particularly regarding the progressive integration of refugees into territorial planning and the village-based approach. Ongoing discussions on refugee urbanization highlight the need to steer local integration toward better-planned spaces equipped with essential services and economic opportunities, while anticipating risks of unintended consequences (difficult living conditions, limited access to services, secondary displacement).

In this context, the core problem addressed by the programme is the structural vulnerability of rapidly urbanizing refugee-hosting areas in eastern Chad to climate hazards — particularly extreme heat, flooding, erosion, and drought — that are highly vulnerable to climate change due to unplanned urbanization, inadequate shelter and increasing pressure from forced displacement. Targeted and anticipatory investment is essential to reduce climate risk exposure, improve the livability of human settlements, and sustainably strengthen the resilience of displaced and host populations.

The programme therefore aims to strengthen the climate resilience of rapidly urbanizing refugee-hosting areas in eastern Chad by (i) improving climate-sensitive territorial and urban planning, (ii) deploying bioclimatic shelter solutions adapted to the Sahelian context to reduce exposure and improve thermal comfort, and (iii) embedding climate adaptation sustainably within regulatory and institutional frameworks in the urban planning and construction sectors. This integrated approach will reduce climate-hazard related losses and damages, ease pressure on natural resources, and prevent secondary displacement, while guiding future investments toward climate-resilient development pathways.

1.2. Programme objectives

1.2.1. Overall programme objective

The overarching objective of the proposed project is to **strengthen the climate resilience of rapidly urbanizing refugee-hosting areas in eastern Chad by reducing exposure to climate hazards — including extreme heat, flooding, erosion, and drought — improving the habitability and safety of human settlements, and sustainably anchoring climate adaptation within territorial planning and institutional frameworks.** This objective directly responds to the growing convergence of climate stressors, forced displacement pressures, and structural infrastructure deficits that increasingly threaten lives, livelihoods, and local development trajectories in the eastern provinces of the country.

Against this backdrop, the project will pursue three interlinked objectives.

- First, to strengthen climate-sensitive territorial and urban planning in priority refugee-hosting areas. This will involve producing multi-hazard risk maps, integrating climate projections into land-use and urban development plans, and developing technical guidance to steer settlement growth away from high-risk zones. Particular emphasis will be placed on building the capacities of provincial and municipal authorities

to use geospatial and climate information for forward-looking planning, thereby reducing future exposure of both displaced and host communities to extreme heat, flooding, erosion, and water stress.

- Second, to implement and validate scalable bioclimatic shelter solutions that improve thermal comfort, structural resilience, and environmental sustainability. Through feasibility analyses, value chain assessments, and the construction and monitoring of prototypes, the project will demonstrate technically viable and economically affordable shelter models adapted to the Sahelian context, while also contributing to ecosystem restoration.
- Third, to institutionalize climate change adaptation within the regulatory and institutional framework of the shelter and construction sector in Chad. This will include strengthening national and subnational capacities, integrating bioclimatic standards into relevant norms and planning instruments, and establishing coordination mechanisms to enable sustained implementation and future scale-up.

In addition to these systemic objectives, the project includes targeted, location-specific interventions in the provinces of Wadi Fira and/or Ouaddaï, with a focus on high-growth refugee-hosting localities such as Guéréda, Farchana, or Hadjer Hadid (to be technically confirmed). In these areas, climate-informed spatial planning will guide safer settlement expansion, while implement bioclimatic shelters will be deployed to reduce indoor heat stress and vulnerability to floods and erosion. Complementary measures — including improved site drainage, small-scale nature-based solutions such as reforestation and soil stabilization will enhance overall habitability and environmental performance. These site-level investments will generate operational evidence on cost-effectiveness, user acceptance, and scalability, particularly benefiting vulnerable refugee and host households exposed to recurrent climate shocks.

Collectively, these objectives reflect a coherent and balanced approach that simultaneously addresses immediate settlement vulnerabilities and longer-term structural drivers of climate risk. The project is aligned with Chad's national priorities, including Chad Connection 2030, relevant sectoral policies on urban development, and the country's commitments under the Global Refugee Forum. By combining territorial planning, resilient shelter, ecosystem restoration, and institutional strengthening, the project seeks to shift refugee-hosting areas in eastern Chad from reactive crisis management toward anticipatory, climate-resilient urban development pathways that can be sustained and replicated at scale.

1.2.2. Selection of target areas

The selection of intervention areas is based on a risk- and vulnerability-driven approach, prioritizing rapidly urbanizing refugee-hosting areas in eastern Chad, where the convergence of climate hazards, forced displacement pressures, and infrastructure deficits is most pronounced. The project will primarily focus on the provinces of Wadi Fira and/or Ouaddaï, with indicative operational targeting around Guéréda and/or selected localities in Ouaddaï (notably Farchana or Hadjer Hadid), subject to technical confirmation during the feasibility study.

First, the targeting builds on the climate vulnerability and risk analysis jointly conducted by UNHCR and CGIAR (2025), which highlights the high exposure of refugee and IDP sites in eastern Chad to compound hazards, including extreme heat, drought, flooding, and erosion. The selected provinces concentrate a significant number of settlements already exposed to severe risk levels, with projections indicating further deterioration by 2040. Targeting these areas therefore maximizes adaptation benefits where needs and potential risk reduction gains are highest.

Second, the proposed localities are among the fastest-growing hosting systems in the country, driven by the massive influx of Sudanese refugees since 2023. This rapid expansion is occurring in environments characterized by fragile ecosystems, limited basic services, and largely unplanned urbanization. Intervening in these high-pressure areas allows action at a critical moment when climate-informed planning can still shape urban growth and prevent maladaptive development trajectories.

Third, considerations of feasibility and scalability potential have guided the geographic focus. Localities such as Guéréda and Farchana already benefit from the operational presence of national authorities, UNHCR, and partners, as well as preliminary planning experience (including the methodology piloted in Farchana). This provides a

concrete foundation to implement climate-sensitive territorial planning approaches and bioclimatic shelter solutions, while facilitating replication in other host areas in the east.

Finally, the selection reflects strong alignment with national priorities and partnership dynamics. The targeted provinces are consistent with Government priorities under Chad Connection 2030 and refugee inclusion efforts, and offer favorable conditions to work closely with MATUH, provincial authorities, and technical partners to sustainably anchor climate resilience approaches.

The final prioritization of localities will be confirmed during the feasibility study, which will refine targeting based on updated data on hazards, settlement growth dynamics, land availability, and implementation capacity.

1.2.3. Specific objectives

Specific Objective 1 / Component 1: Strengthening climate-sensitive urban and territorial planning

Strengthen land-use planning and the governance of human settlements through a climate-informed territorial approach focused on a priority province in eastern Chad (at this stage indicatively: Wadi Fira and/or Ouaddaï), including its provincial capital as well as 2 to 3 high-growth localities within the same administrative area experiencing significant pressure from large-scale refugee hosting (notably around Guéréda and/or a locality in Ouaddaï such as Farchana or Hadjer Hadid).

The objective includes the systematic integration of climate risk assessments into territorial planning, the development of multi-hazard risk maps, and the creation of zoning tools and infrastructure siting guidance directing development toward safe and resilient areas. To this end, the project will apply UN-Habitat's **Multilayered Vulnerability Assessment (MVA)** methodology as its primary analytical framework. Unlike conventional single-hazard mapping approaches, the MVA is specifically designed to identify hotspots where climate, biodiversity, and urban vulnerabilities converge — making it particularly well-suited to the compound risk environment of eastern Chad, where extreme heat, flooding, erosion, and ecosystem degradation interact with the pressures of rapid, largely unplanned settlement growth driven by forced displacement. Concretely, the MVA will produce overlapping spatial layers capturing: (i) climate hazard exposure (floods, droughts, heatwaves, erosion); (ii) urban vulnerability (infrastructure deficits, settlement density, informal expansion into high-risk zones); and (iii) ecosystem fragility (land degradation, loss of vegetative cover, reduced water infiltration capacity). The superimposition of these layers will allow for the identification of priority intervention zones — areas where multiple vulnerability dimensions overlap and where targeted, sequenced investment in climate-resilient infrastructure, shelter, and ecosystem restoration will generate the highest adaptation returns. This approach builds directly on MVA applications successfully implemented by UN-Habitat in comparable contexts, including Sahab (Jordan) and the Kerkennah Archipelago (Tunisia), and will be adapted to the specific biophysical, institutional, and displacement dynamics of eastern Chad. The planning frameworks, methodologies, and tools developed in selected sites will be designed as standardized and replicable models, enabling progressive scaling across refugee-hosting areas in eastern Chad.

This approach will sustainably reduce exposure to flooding, erosion, extreme heat, and drought, while equipping local authorities with robust decision-making tools for long-term climate-resilient territorial development.

Key indicators:

- 2–3 multi-hazard risk maps produced and validated
- 2–3 land-use plans integrating climate risks
- Number of localities with climate-sensitive land-use plans (2–3)

Specific Objective 2 / Component 2: Implementing climate-resilient bioclimatic shelter solutions

Building on available technical analyses and existing solutions developed and documented by UNHCR through the Shelter and Sustainability (TSS) platform, design and implement climate-resilient bioclimatic shelter prototypes that

directly contribute to the adaptation objectives of the Adaptation Fund and are based on scalable production and construction models adapted to the local context.

This component adopts an integrated climate habitability approach, going beyond shelter alone to include overall site planning and improvement of the urban microclimate. The solutions will aim to simultaneously reduce exposure to climate hazards, household thermal sensitivity, and environmental degradation around settlements.

Specific Objective 2 builds directly on a FCDO-funded pilot currently being implemented by UN-Habitat in Farchana (Ouaddaï), which is designed to identify and validate a locally produced, climate-resilient bioclimatic shelter model adapted to the Sahelian context. The pilot is testing both the physical performance of proposed shelter typologies — including thermal comfort, flood resilience, and resistance to extreme winds — and the economic viability of locally grounded production and replication models that can be sustained without dependency on external humanitarian financing. Results are expected by December 2026. The Adaptation Fund project is deliberately sequenced to build on these findings: rather than starting from scratch, Component 2 will use the pilot's validated technical designs and economic evidence to move from proof-of-concept to structured implementation and scale-up, deploying proven solutions across a significantly larger number of households in climate-exposed refugee-hosting localities in eastern Chad.

Solutions will include:

- Thermal protection against extreme heat;
- Increased resilience to flooding, wind, and erosion;
- Use of durable and locally available materials;
- Structured layout of roads and public spaces aligned with climate-informed planning;
- Strategic vegetation (shading, soil stabilization, improved water infiltration);
- Drainage measures and small-scale nature-based solutions;

The project will generate concrete evidence on technical feasibility, cost-effectiveness, and social acceptability, supporting progressive scaling and informing future large-scale adaptation investments. At this stage, the programme is expected to directly benefit approximately 1,000 households (indicative figure pending confirmation by feasibility study).

The social acceptability of proposed shelter solutions is a critical determinant of project success and long-term impact. In contexts of forced displacement, the willingness of households — both refugee and host — to invest in, maintain, and take ownership of improved shelter is not guaranteed: it depends on perceived security of tenure, trust in local authorities, intercommunal relations, and cultural fit of proposed solutions. Where these conditions are absent, even technically sound interventions risk low uptake, poor maintenance, and — in the worst case — increased intercommunal tension over access to benefits. The feasibility study will therefore systematically assess social acceptability alongside technical and financial viability, including community and cultural preferences, tenure security perceptions, gender-differentiated needs, and intercommunal dynamics. Findings will directly inform design choices and beneficiary engagement modalities, ensuring that shelter solutions are not only climate-resilient but locally owned and conflict-sensitive.

The exact number of beneficiary households, as well as targets associated with the indicators below, will be refined during the feasibility study and adjusted based on final technical parameters and available budget.

Key indicators (preliminary estimates - (pending confirmation by feasibility study):

- An estimated 1,000 vulnerable households benefiting from climate-resilient shelters (pending confirmation by feasibility study)
- Reduction in shelter damage caused by climate change (>60%)
- Reduction in indoor temperature (–6 to –12°C)
- Implemented shelters protected by functional nature-based solutions
- Shelter production units operational

Specific Objective 3 / Component 3: Embedding climate adaptation in the regulatory and institutional framework

Structurally transform the institutional and regulatory framework of the urban planning and construction sector in Chad to sustainably anchor climate adaptation in national standards and planning practices.

The programme will support:

- The explicit integration of bioclimatic standards into national construction codes (natural ventilation, siting, orientation, water management, appropriate materials);
- The introduction of legally enforceable climate-resilient zoning;
- The development and/or finalization of implementing decrees for urban planning and land-use laws;
- Capacity strengthening of relevant ministries (MATUH, Environment, Planning, etc.) to apply these standards;
- The establishment of a multi-stakeholder and multi-level governance coordination mechanism linking national, subnational, and local actors across the planning, shelter, and environment sectors.

In addition, the project will explore, in coordination with UN-Habitat's Climate Change Unit (CCUES), opportunities to contribute to the strengthening of the urban content of Chad's Nationally Determined Contribution (NDC 3.0), which has not yet been submitted. This will be pursued in a light-touch manner — focused on knowledge-sharing and technical input rather than dedicated budget lines — with the scope and modalities to be confirmed at full proposal stage based on country interest and available resources.

This component aims to institutionalize climate adaptation within the construction and planning sectors, ensuring that future investments — both public and private — systematically integrate climate risks, and that project results move beyond site-specific stage to become national standards.

Key indicators:

- 200 institutional and technical actors trained
- Multi-stakeholder coordination mechanism established and operational
- Number of national climate policy documents integrating the climate resilience needs of displacement-affected urban communities (target: at least 1; indicatively Chad's NDC 3.0 or equivalent instrument)

Expected results chain:

By combining climate-informed territorial planning, the deployment of bioclimatic shelter solutions, and institutional strengthening, the programme aims to generate a transformative impact by:

- sustainably reducing climate-hazard related losses and damages in host areas;
- improving thermal comfort, safety, and dignity for displaced and host households;
- steering public and private investments toward climate-resilient development pathways;
- reducing pressure on natural resources and recurring repair costs;
- creating the conditions for national-scale replication of the approaches tested;
- and contributing, where conditions allow, to the integration of urban climate resilience into Chad's national climate policy framework.

Link to the SDG Framework:

The proposed programme contributes directly to several Sustainable Development Goals (SDGs). Component 2 supports SDG 6.4 by promoting sustainable water management through climate-resilient settlement design, improved drainage, nature-based solutions, and measures that reduce pressure on scarce water resources.

Components 2 and 3 contribute to SDG 17.9 through targeted capacity-building of local authorities, technical institutions, and government counterparts, while strengthening the systems, knowledge, and governance frameworks required for climate-resilient urban development. Component 2 also contributes to SDG 5 by promoting gender-responsive shelter and settlement solutions that address the specific needs of women and girls, enhance their safety and wellbeing, and support their participation in adaptation and resilience-building processes.

1.3. Programme Components and Financing:

Project/Programme Components	Expected Concrete Outputs	Expected Outcomes	Amount (US\$)	
Component 1 — Climate-sensitive territorial and urban planning	1.1 Multi-hazard climate risk maps (erosion, flooding, drought, extreme heat) developed for 2–3 priority localities 1.2 Land-use plans integrating climate risks (zoning, drainage, infrastructure siting) 1.3 Technical guidelines for planned urban growth in hosting areas 1.4 Field surveys, GIS data harvesting, community mapping (if applicable), design workshops and technical validation completed	1.1 Strengthened territorial planning capacities to reduce exposure to floods, erosion, and extreme heat 1.2 Climate risks systematically integrated into territorial planning decisions 1.3 Enabling conditions established for climate-resilient human settlements in rapidly urbanizing host areas	\$ 421,00	1 253
Component 2 — Implementation of bioclimatic shelter solutions	2.1 Feasibility study on climate-resilient shelter solutions (incl. mechanization and proven technologies) 2.2 Local and regional value chain analysis (materials, construction, private sector) 2.3 Identification of affordable and replicable business models (cooperatives, micro-enterprises, rent-to-own, cost-sharing) 2.4 Validation of reference technical designs adapted to the Sahelian context 2.5 Construction of bioclimatic shelters/shelter prototypes 2.6 Establishment of material production units 2.7 Technical and social monitoring (cost-effectiveness, performance, acceptability) 2.8 Ecosystem restoration (reforestation, soil stabilization, water management)	2.1 Financially viable, socially acceptable, and replicable shelter solutions defined 2.2 Demonstrated reduction in exposure to extreme heat and climate hazards 2.3 Evidence on technical feasibility and cost-effectiveness 2.4 Reduced environmental degradation and improved ecosystem functions 2.5 Reliable access to clean electricity for households 2.6 Solid technical basis for national scale-up	\$ 942,00	6 327
Component 3 — Integration of climate adaptation into regulatory and institutional frameworks	3.1 Training of local authorities, municipalities, and communities (~300 actors) 3.2 Improved land governance tools and strengthened community participation 3.3 Integration of bioclimatic standards into national frameworks 3.4 Multi-stakeholder coordination mechanism established 3.5 Alignment with national adaptation policies and commitments (asylum law, GRF	3.1 Strengthened institutional and community frameworks for climate-resilient settlement planning 3.2 Increased ownership and sustainability of adaptation actions 3.3 Progressive integration of climate adaptation into shelter and construction standards and practices	\$ 614,00	835

	2023)			
Project Execution Cost (9.5%) (PMU : 7% UNHCR / 2.5% UN-Habitat)	—	—	\$ 613,00	799
Total Project Cost	—	—	\$ 590,00	9 216
Project Cycle Management Fee (Implementing Entity) (UN-Habitat)	—	—	\$ 410,00	783
Total Financing Requested	—	—	\$ 10 000 000,00	

1.4. Projected Calendar

Start of Project/Programme Implementation	1 July 2027
Mid-term Review (if planned)	December 2028
Project/Programme Closing	30 June 2031
Terminal Evaluation	July – December 2030

PART II. PROGRAMME JUSTIFICATION

2.1. Project Components, Adaptation Activities and Contribution to Climate Resilience.

The proposed project is justified by the convergence of three major challenges in eastern Chad: the rapid intensification of climate hazards, the accelerated and often unplanned and unregulated urbanization of refugee-hosting areas, and persistent institutional and financial capacity constraints that limit the effectiveness of adaptation responses. By addressing these interdependent factors simultaneously through a combination of territorial interventions, shelter improvements, basic service provision, and institutional strengthening, the project provides an integrated, coherent, and cost-effective response, fully aligned with national and international priorities.

Climate projections for Chad indicate a progressive worsening of risks in the coming decades. Average temperatures are expected to continue rising, with an increase in the number of days of extreme heat exceeding critical thresholds for human health. Droughts are becoming more severe and prolonged, intensifying water scarcity and placing additional stress on livelihoods and ecosystems. At the same time, although annual rainfall remains uncertain, intense rainfall events are expected to become more frequent and concentrated, increasing the risks of pluvial flooding, flash floods in wadis, and accelerated soil erosion. In eastern provinces such as Wadi Fira and Ouaddaï, these dynamics are amplified by environmental degradation, low soil infiltration, and inadequate drainage systems.

Urban and peri-urban areas hosting refugees are particularly exposed to secondary risks such as water stagnation, shelter degradation, overburdened water, sanitation and health (WASH) systems, and contamination of water sources. Existing infrastructure is often under-dimensioned, outdated, or nonexistent, while the spontaneous expansion of settlements into flood-prone or erosion-prone areas significantly increases vulnerability. This is further compounded by the predominantly informal nature of construction, characterized by the use of low-quality materials, lack of adherence to building standards, and limited technical oversight, which reduces structural resilience to flooding, extreme heat, and erosion. Without structural intervention, climate change is expected to lead to increased asset losses, recurring humanitarian costs, and secondary displacement, undermining local development trajectories. This will also drive escalating economic and non-economic loss and damage, including impacts on livelihoods, health, and social cohesion, with risks of irreversible harm over time.

Financial constraints are a major aggravating factor. Public resources are heavily absorbed by humanitarian response and crisis management, leaving limited scope for anticipatory adaptation investments, which are nevertheless more cost-effective in the long term. There is a pertinent financing gap – including from international actors and sources – as climate finance remains insufficient, fragmented, and often difficult to access for and direct to high-risk, fragile contexts. The project is therefore also justified by its catalytic role, mobilizing adaptation financing that would otherwise be difficult to secure, in order to protect vulnerable populations and essential assets in host areas.

The project specifically aims to bridge the critical gap between national climate strategies and their operational implementation at the local level. It has been designed in response to the growing impacts of climate hazards, shocks and stresses in eastern Chad, which disrupt livelihoods, damage infrastructure, and weaken human settlements hosting displaced populations. A key driver of these losses lies in the lack of climate-informed territorial planning, the vulnerability of existing shelter typologies, and weak regulatory frameworks integrating adaptation.

In response, the project adopts an integrated approach combining climate-sensitive territorial planning, implement deployment of bioclimatic shelter, and institutional anchoring of adaptation within the urban planning and construction sectors. Planned interventions — including the development of climate-informed land-use plans, construction of resilient shelter prototypes, site-level drainage improvements, nature-based solutions, will provide communities with safer, multifunctional infrastructure adapted to the Sahelian context. At the same time, capacity building and the integration of bioclimatic standards will ensure the sustainability and scalability of the approaches tested.

While the project covers several priority localities, its scope is deliberately structured to remain operationally manageable and ready for implementation. It builds on existing partnerships between UN-Habitat, UNHCR, and the Government of Chad, as well as on already available vulnerability analyses, thereby reducing start-up risks and strengthening readiness for execution.

Implementation will be progressive and sequenced, with investments prioritized based on risk levels, technical readiness, and seasonal constraints. This approach will allow lessons from initial interventions to inform subsequent phases and ensure adaptive programme management.

By combining centralized strategic coordination with decentralized implementation alongside national and local authorities, the project balances ambition with operational realism. This integrated approach aims to generate sustainable impact while ensuring effective delivery.

The project is structured around three complementary components.

- **Component 1** focuses on climate-sensitive territorial and urban planning to structurally reduce future exposure of populations and infrastructure. It provides the spatial and decision-making foundation needed to guide settlement growth toward safer areas.
- **Component 2** focuses on the deployment of bioclimatic shelter solutions adapted to the Sahelian context, in order to improve thermal comfort and structural resilience of shelters, while restoring ecosystem functions around sites.
- **Component 3** aims to sustainably integrate climate change adaptation into the regulatory and institutional framework of the shelter and construction sector in Chad, ensuring the durability, replication, and scaling of the approaches tested.

2.1.1. Component 1 – Climate-sensitive territorial and urban planning

Strengthening climate-informed territorial planning is a fundamental lever for climate resilience in eastern Chad. Despite the existence of national planning frameworks, their implementation remains limited due to insufficient technical, institutional, and informational capacities at provincial and municipal levels. In a context of rapid urbanization in refugee-hosting areas, the lack of systematic integration of climate risks into land-use decisions significantly increases the exposure and vulnerability of households and infrastructure to hazards. This gap is particularly consequential in the context of rapid and largely informal urbanisation linked to forced displacement. The arrival of over 910,000 Sudanese refugees since April 2023 has generated dense, unplanned settlements around existing towns and formal camp perimeters — situated, by the logic of displacement rather than risk assessment, in areas exposed to flash flooding, erosion, and extreme heat. In the absence of climate-informed land-use guidance, shelter, water infrastructure, and community facilities are being established in locations and with construction standards that offer little resilience to compound hazards. Investing in climate-informed territorial planning now — before further consolidation of informal settlements occurs — is therefore not only a resilience measure but a cost-avoidance imperative.

This component aims to operationally integrate climate risks into land-use planning and the development of formal and informal human settlements at the scale of a priority province — indicatively Wadi Fira and/or Ouaddaï — as well as in two to three highly exposed localities, including the provincial capital. By structuring space before investing in it, the component directly contributes to reducing physical exposure to climate hazards.

The analysis will primarily rely on existing, accessible and reliable data — national hazard maps, satellite imagery, hydrological data, and settlement footprint mapping — complemented, where necessary, by targeted, qualitative, participatory data collection and geospatial analyses to fill information gaps and support risk-informed decision-making.

Key outputs:

Output 1.1.1: Climate risk analysis tools produced and operationalized

- Production of multi-hazard climate maps (erosion, flooding, drought, heat islands, wildfire, land degradation) for targeted localities, integrating historical climate data and downscaled future climate projections
- Spatial analysis of high-risk areas and urban expansion dynamics (e.g. historic, current and future urban growth patterns, including informal settlement expansion and encroachment into ecologically precarious and hazard prone zones, rural-urban migration, and climate- and conflict-induced displacement)
- Consolidation and harmonization of existing geospatial databases, leveraging datasets from national ministries, humanitarian actors, and development partners
- Technical validation workshops with national and local authorities and relevant stakeholders from selected refugee hosting areas, including civil society, academia, and where possible, local communities

Output 1.1.2: Climate-sensitive urban plans developed and adopted

- Development of land-use plans integrating:
 - improved drainage systems to better manage flood risk and urban/peri-urban water management
 - protective zoning to delineate no-build and restricted-use zones in high risk hotspots, such as flood plains, erosion and drought-prone land, and heat islands
 - ecological corridors to restore and preserve green and blue networks, enhancing resilience building ecosystem services and biodiversity
 - identification of safe settlement areas suitable for accommodating population growth, shelter and infrastructure development, migration, and potential climate- and conflict-induced displacement
- Development of operational guidelines for planned urban growth in host areas, including practical tools, standards, and step-by-step procedures for risk-informed land allocation, site planning, and climate-resilient service provision in low-risk areas
- Integration of climate considerations into local planning tools, embedding climate risk, adaptation measures, and resilience standards into urban plans, zoning, and infrastructure planning processes

Output 1.1.3: Institutional capacities strengthened for climate-informed planning

- Training of local authorities in the collection, analysis, and use of climate and geospatial data for data-driven, evidence-informed planning
- Ongoing technical and operational support to provincial and municipal services
- Establishment of standardized risk analysis protocols and tools

Transformational outcomes

This component will directly reduce the exposure and vulnerability of households and infrastructure by redirecting settlement expansion toward safer areas and limiting spontaneous development in vulnerable zones. In particular, it will:

- avoid high repair and reconstruction costs linked to informal construction in high-risk areas;
- improve integrated territorial management and the sustainability of public and humanitarian investments;
- strengthen the capacity of authorities to anticipate, plan for and respond to future climate risks;
- lay the foundation for a replicable and scalable approach to resilient urbanization in other eastern provinces.

By establishing a climate-informed spatial framework and strengthening institutional capacities, this component provides the strategic foundation for the programme's other interventions.

2.1.2. Component 2 – Deployment of climate-resilient bioclimatic shelter solutions

In eastern Chad, the predominance of low-durability emergency shelters is a major factor of vulnerability to climate hazards, particularly extreme heat, intense rainfall, erosion, and strong winds. Despite humanitarian efforts, the lack of proven technical and economic models limits the transition toward more durable and scalable shelter solutions. This component aims to design, test, and validate climate-resilient bioclimatic shelter solutions, while structuring the local value chains required for progressive scaling. It combines technical analysis, economic validation, and physical deployment to shift from temporary shelter approaches to durable shelter solutions.

Component 2 is anchored in, and explicitly sequenced to build upon, a FCDO-funded pilot project currently being implemented by UN-Habitat in Farchana (Ouaddaï province). This pilot constitutes the proof-of-concept phase for the shelter approach that the Adaptation Fund investment will take to scale.

The FCDO pilot is pursuing two complementary objectives. First, on the physical side, it is testing and validating bioclimatic shelter typologies adapted to the Sahelian context — assessing thermal performance (passive cooling, natural ventilation, shading), structural resilience to flooding, erosion, and extreme winds, and the suitability of locally available materials including compressed earth blocks (CEB), stabilized adobe, and other low-carbon alternatives. Second, on the economic side, the pilot is designed to identify a replicable business model for locally produced durable shelter — one that can be financed and sustained through local resources, without ongoing dependency on external humanitarian funding. This includes mapping local value chains, assessing the viability of community-based production units and artisan cooperatives, and identifying cost-sharing or rent-to-own mechanisms that make climate-resilient shelter financially accessible to both refugee and host households. Pilot results are expected by December 2026.

The feasibility study funded under the Project Formulation Grant then takes this evidence as its starting point and goes significantly further: it assesses whether, and under what conditions, the validated approach can be replicated across a wider range of sites, household profiles, land tenure situations, and construction contexts in eastern Chad. It deepens the economic analysis — stress-testing the business model identified in the pilot against different financing environments, supply chain constraints, and community affordability levels — and conducts the full environmental, social, and gender assessment required to meet Adaptation Fund standards. Critically, the feasibility study will also determine the final targeting of beneficiary households, refine the cost-per-unit estimates, and produce the technical specifications and implementation protocols that will govern full-scale deployment. In this sense, the FCDO pilot reduces risk and accelerates the feasibility study by providing an evidence base that would otherwise need to be generated from scratch — but it does not replace it. The feasibility study remains the indispensable bridge between a locally validated concept and a fully investment-ready, AF-compliant implementation package capable of delivering results at scale across multiple localities and household typologies.

Key outputs

Output 2.1.1: Feasibility study and economic models validated

- Analysis of local materials and value chains, assessing availability, cost, performance, and scalability of climate-resilient construction materials
- Assessment of social acceptability of proposed solutions including community and cultural preferences, user needs, local ownership, and gender, equity and social inclusion considerations
- Ensure long-term maintainability design, relying on locally available materials and locally trained artisans, ensuring functionality beyond the project period without dependency on imported components or external technical support.
- Comparative analysis of construction techniques (compressed earth blocks, stabilized bricks, improved adobe, etc.) based on climate performance, durability, and cost-effectiveness
- Identification of replicable economic models (cooperatives, micro-enterprises, rent-to-own, cost-sharing mechanisms to enable affordability, sustainability and scale)
- Establishment of cost and economic efficiency benchmarks, including lifecycle costs, thermal performance, and resilience benefits compared to existing shelter and shelter solutions
- Establishment of baseline data on shelter performance (thermal, structural, flood resilience) against which

prototype monitoring results will be measured

- Identification of cost per unit and beneficiary targeting criteria.

Output 2.1.2: Bioclimatic shelter typologies designed

- Technical design of climate-resilient shelters integrating:
 - o thermal performance, passive cooling, natural ventilation, and shading solutions cooling to reduce heat stress
 - o resistance to extreme winds, dust and sandstorms
 - o elevated and flood-resilient design features to protect against flooding and manage runoff
 - o durability, sustainability and local acceptance of materials
- Participatory design process ensuring active involvement of women, persons with disabilities, and vulnerable households in shelter typology selection and prototype feedback
- Construction of shelter prototypes in high-risk hotspot localities
- Technical, economic, and social monitoring of prototypes, utilizing user and beneficiary feedback and climate resilience metrics
- Development of technical guidelines for replication, including but not limited to, including design standards, construction methods, and material specifications
- Establishment of community-based maintenance arrangements, including maintenance committees and handover protocols with maintenance guides adapted to local capacity levels

Output 2.1.3: Local value chains strengthened

- Establishment of local material production units
- Quality control mechanisms for locally produced materials, including testing protocols and minimum performance standards to ensure construction consistency at scale
- Engagement of local micro-enterprises and artisans to support construction, operation and maintenance
- Integration of nature-based solutions around pilot sites (e.g., shading, windbreaks, and drainage to enhance microclimate and resilience)
- Structured training and knowledge transfer programme for local artisans and municipal technical staff, ensuring independent use of technical guidelines and replication capacity after project closure

Transformational outcomes

This component will directly reduce household vulnerability to climate hazards by improving structural resilience, thermal comfort, and stormwater management. It will generate evidence on the technical feasibility, financial viability, and climate performance of the solutions tested, as well as their social acceptability, user satisfaction, and potential for sustained local adoption.

By structuring and strengthening local value chains and replicable economic models, it will create the conditions for a progressive, systemic and sustainable large-scale transition toward durable climate resilient shelter and shelter solutions in refugee-hosting areas.

2.1.3. Component 3 – Integration of climate adaptation into the regulatory and institutional framework

Despite the existence of relevant policy frameworks, the effective integration of climate risks into construction standards and planning tools remains limited in Chad. In eastern host areas, this results in largely spontaneous urbanization and the continued replication of vulnerable shelter models.

This component aims to institutionalize climate adaptation within the urban planning and construction sector by

equipping authorities with the capacities, tools, and regulatory frameworks needed to systematically integrate climate risks into future investments. In doing so, it also constitutes a strategic entry point for contributing to Chad's Nationally Determined Contribution (NDC 3.0) finalization process — which has not yet been submitted — with a focus on reinforcing the urban and displacement-sensitive content of the contribution. This engagement will be pursued in coordination with UN-Habitat's Climate Change Unit (CCUES).

Key outputs

Output 3.1.1: Institutional capacities strengthened

- Training of key ministries (MATUH, Environment, Planning) on climate risk integration, resilient urban planning, and bioclimatic construction approaches and shelter solutions
- Capacity strengthening of provincial and municipal authorities focusing on the operationalization and institutionalization of risk-informed planning and enforcement of climate-resilient standards
- Development of standardized training modules, delivered through blended learning approaches including workshops, practical exercises, and training-of-trainers approaches to ensure sustained capacity development and institutional uptake

Output 3.1.2: Normative frameworks and regulatory tools improved

- Integration of bioclimatic standards into national frameworks, including building codes, urban planning standards, and shelter regulations
- Support for the development or revision of implementing regulations to operationalize climate adaptation requirements within planning and construction systems
- Introduction of enforceable climate-resilient zoning to restrict development in high-risk areas and guide safe, climate-informed urban expansion
- Production of national technical guidelines
- Technical support to the integration of urban climate resilience — including the specific needs of displacement-affected communities — into Chad's NDC 3.0, drawing on the evidence generated by Components 1 and 2 of this project. This reflects UN-Habitat's National Urban Policy (NUP) framework as a guiding instrument for harmonizing national and subnational urban legislation with climate adaptation commitments

Output 3.1.3: Multi-stakeholder coordination and participation strengthened

- Establishment of a multi-stakeholder coordination mechanism, linking national, regional, and local authorities with technical and community actors across planning, shelter, and environment sectors
- Strengthening of community participation to enhance inclusivity, social equity, ownership, and responsiveness to local climate risks
- Integration of local and traditional knowledge, tools and solutions into planning practices to complement technical approaches, strengthen context-specific resilience solutions, and ensure local adoption and ownership

Transformational outcomes

This component will ensure the durable integration and institutionalization of climate adaptation into national and local planning and construction systems. It will prevent the continued development of settlements exposed to climate hazards and guide future investments toward resilient pathways.

By strengthening institutional and regulatory frameworks — and by contributing, where conditions allow, to the urban content of Chad's NDC 3.0 — it will ensure the sustainability, replicability, and systemic impact of project investments in eastern Chad, translating site-level adaptation evidence into national climate policy commitments.

2.1.4. Overall contribution of the programme to resilience

The combination of the three components — risk-informed planning, feasibility and physical implementation, and capacity development and institutional strengthening — creates a coherent system that:

- reduces household exposure and vulnerability to climate risks;
- improves the quality and resilience of human settlements, infrastructure and services;
- strengthens long-term institutional capacities;
- creates replicable, sustainable and socially acceptable models for other host and vulnerable areas in Chad;
- directly contributes to Adaptation Fund outcomes 4, 6, and 7.

Table : Climate rationale by components

Components	Rationale for Selected Approach	Alternatives considered and justification
Component 1: Climate-sensitive territorial and urban planning	This component addresses the root cause of growing climate risk in rapidly urbanizing refugee-hosting areas: unplanned expansion into high-risk zones. By integrating multi-hazard climate projections (extreme heat, flooding, erosion, drought) into land-use planning and spatial development tools, the project reduces future exposure before infrastructure investments are made. Climate-informed zoning, drainage planning, and identification of safe settlement areas prevent maladaptation and avoid locking in climate risk. Strengthening geospatial analysis and planning capacity ensures that adaptation is anticipatory rather than reactive.	Continuing business-as-usual expansion without climate-informed planning would lead to repeated losses, reconstruction costs, and increasing humanitarian dependency. Relocation after disasters was considered but deemed socially disruptive and economically inefficient. Stand-alone infrastructure investments without spatial planning would risk reinforcing exposure. Therefore, anticipatory territorial planning is the most cost-effective and sustainable adaptation pathway.
Component 2: Deployment of bioclimatic shelter solutions	This component directly reduces household-level vulnerability to extreme heat, flooding, erosion, and high winds through structurally resilient, thermally adapted shelter prototypes. By combining technical feasibility analysis, economic modeling, and implement construction, the project ensures that solutions are climate-adapted, affordable, and scalable. Integration of nature-based solutions further reduces environmental degradation. Demonstrating cost-effectiveness supports replication and scale-up.	Continued reliance on emergency shelters was considered but found economically unsustainable due to short lifespan and recurrent damage. Imported construction models were considered but rejected due to high costs and low local ownership. Purely humanitarian shelter responses without economic modeling would not enable scale. The selected approach balances structural resilience, affordability, and local economic integration.
Component 3: Integration of climate adaptation into the regulatory and institutional framework	Sustainable climate resilience requires institutionalization. This component embeds bioclimatic standards, climate-sensitive zoning, and risk-informed construction norms into national and subnational regulatory frameworks. Strengthening institutional capacity and coordination ensures that adaptation is systematically applied in future public and private investments. This prevents maladaptation and ensures long-term durability beyond project lifetime.	Limiting the intervention to pilot sites without regulatory integration would produce isolated benefits without systemic change. Ad hoc training without regulatory reform would not ensure compliance or sustainability. Infrastructure investments alone would lack an enabling environment. Institutional integration is therefore essential for long-term transformational impact.

2.2. Economic, Social and Environmental Benefits, Safeguards and Gender Considerations.

The proposed project will deliver significant economic, social and environmental benefits in Eastern Chad, with a particular focus on refugee-hosting areas experiencing rapid and often unplanned urbanization. These areas are among the most climate-vulnerable in the country, where displaced populations and host communities — especially women, youth, female-headed households, persons with disabilities and households living in poverty — face acute exposure to extreme heat, flooding, erosion and prolonged drought. By combining climate-sensitive planning, people-centred settlement upgrading approaches, resilient shelter and shelter solutions, and institutional strengthening, the project will reduce vulnerability at both household and systems level while supporting sustainable local development.

The project specifically targets the most climate-exposed and socio-economically vulnerable households in Eastern Chad, many of whom currently live in precarious shelters highly sensitive to flooding, strong winds, erosion and extreme heat. Priority beneficiaries include: (i) registered Sudanese refugees; (ii) households of two or more persons lacking adequate shelter; (iii) people with vulnerabilities, including women at risk and persons with disabilities; and (iv) households that have not previously benefited from shelter assistance. Beneficiary selection will follow a participatory approach involving CNARR, UNHCR and community leaders, in line with Adaptation Fund requirements for meaningful stakeholder engagement and UN-Habitat participatory planning principles, with households organized in small groups to strengthen social cohesion and mutual support. While final beneficiary selection will also depend on targeted areas and negotiations with the Government, UNHCR usually targets approximately 40% refugees and 60% host communities in similar interventions.

Economic benefits

The project will generate several direct and lasting economic benefits:

- Reduced economic losses from climate shocks through more resilient shelter, lowering recurring shelter repair costs (notably observed in 2024 with around 2.5% of shelters destroyed).
- Creation of local economic opportunities through self-construction and the establishment of material production units, supporting green jobs and employment for youth, women, and local artisans, thereby supporting locally led economic recovery and strengthening informal urban livelihoods.
- Development of local value chains in construction, sustainable material production, and infrastructure maintenance, reducing reliance on costly imports and advancing local circular economy approaches.

These benefits will strengthen the economic resilience of vulnerable households while stimulating sustainable local micro-economies in host areas.

Social benefits

The project will significantly improve living conditions for vulnerable communities:

- Safer, more dignified, and thermally adapted shelter, reducing exposure and vulnerability to climate hazards and improving protection, privacy, and family health and wellbeing, consistent with UN-Habitat adequate shelter principles and Adaptation Fund social safeguards on human dignity and safety.
- Improved safety for women and girls through more resilient shelters, safer urban planning, and local access to materials and services, reducing exposure to risks associated with firewood collection.
- Active participation of communities, particularly women and youth, in planning, material selection, shelter and shelter prototype design, construction processes, and operation and maintenance activities.
- Strengthening of local capacities (municipalities, community committees, artisans), enhancing urban governance systems, promoting local ownership and long-term sustainability of interventions.
- Enhanced social cohesion between host and refugee populations through collaborative activities (eco-material production, tree planting, participatory site design, construction, and management)

These improvements will contribute to social cohesion, local stability, and reduced vulnerability in particularly fragile

areas.

Environmental benefits

The project will generate significant environmental benefits:

- Reduced land degradation through improved drainage systems and construction models that limit erosion and gully formation.
- Reduced pressure on natural resources, particularly through the use of locally sourced, low-carbon construction materials, ensuring sustainable extraction practices consistent with environmental safeguard requirements.
- Improved local microclimates through the planting of approximately two trees per household, contributing to shading, reduced extreme heat, soil restoration, and the creation of ecological corridors.
- Anticipated reduced greenhouse gas emissions through the use of innovative building techniques supporting low-emission development pathways in urban settlements.
- Reduced flood risks through improved stormwater management and climate-adapted site planning.

Overall, these measures will strengthen the resilience of local ecosystems while supporting the long-term adaptation of both host and refugee communities.

Prevention and mitigation of negative impacts (compliance with Adaptation Fund policies)

The project is designed to avoid or mitigate potential social and environmental risks, in line with the Adaptation Fund's Environmental and Social Policy (ESP) Gender Policy. Key measures include:

- Comprehensive environmental and social screening and impact assessments conducted upstream, including analysis of risks related to sites and settlement selection, labor conditions, materials, construction activities, and climate hazards, as well as potential downstream social risks such as livelihood disruption, inequality in access to benefits, and community tensions.
- Selection of materials aligned with local regenerative capacity, to avoid deforestation, over-extraction, degradation, and pressure on natural ecosystems and biodiversity.
- Inclusive participation, ensuring that women, youth, persons with disabilities, and vulnerable and marginalized households influence technical design choices and shelter-related decisions, consistent with Free, Prior and Informed Participation principles applied in UN-Habitat programming, while also ensuring equitable access to livelihood and employment opportunities generated through project activities.
- Integration of gender equality, protection, safeguarding, and anti-exclusion measures into all community engagement and institutional capacity-building activities, ensuring compliance with Adaptation Fund Gender Policy and UN-Habitat "leave no one behind" commitments, including measures to prevent exploitation in labour participation, ensure safe working conditions, and promote equitable benefit-sharing across host and refugee communities.
- Avoidance of involuntary displacement and resettlement through participatory land-use planning and support to local authorities for responsible land management, in line with Adaptation Fund ESP requirements on resettlement avoidance and minimization, and applying conflict-sensitive planning approaches to reduce the risk of land-related disputes or secondary displacement.
- Accessible, transparent grievance redress and complaint mechanisms, managed in a participatory, gender-sensitive and equitable manner.
- Continuous environmental and social monitoring, including assessment of climate, hydrological, and social risks throughout implementation, with adaptive management mechanisms to address emerging risks in line with AF ESP compliance requirements, including monitoring of livelihood impacts, social cohesion indicators, and potential conflict dynamics to ensure early mitigation of emerging instability risks..

2.3. Analysis of the cost-effectiveness of the programme.

Costs of the business-as-usual scenario:

Under the current scenario of inadequate urban and territorial planning, human settlements in eastern Chad continue to expand spontaneously, often into areas with high climate vulnerability: runoff channels, flood-prone lowlands, unstable dunes, or land subject to accelerated erosion. The absence of climate-informed planning tools prevents risk anticipation, resulting in irregular and costly long-term settlement patterns. This “business-as-usual” model leads to recurrent and cumulative costs: repeated destruction of shelters and infrastructure, economic losses for households, ongoing repairs, and repeated mobilization of emergency humanitarian assistance.

The proposed project demonstrates strong cost-effectiveness by prioritizing anticipatory adaptation investments that reduce recurring losses linked to climate hazards in refugee-hosting areas of eastern Chad, while generating social, economic, and environmental co-benefits. Currently, settlements hosting displaced populations are highly exposed to extreme heat, flooding, erosion, and land degradation. Existing approaches remain largely reactive, focusing on repeated shelter repairs, reconstruction after heavy rainfall, or the provision of temporary emergency shelters. These responses address symptoms rather than the structural drivers of climate vulnerability and result in significant recurring costs for public authorities and humanitarian actors.

Each dollar invested in these measures reduces multiple dollars in future losses and builds durable, scalable resilience in eastern Chad. The programme’s co-benefits generate substantial savings, strengthening overall cost-effectiveness:

- Reduced secondary displacement—frequent when emergency shelters are destroyed by rainfall—represents a major gain: each forced relocation costs on average USD 150–300 per household (transport, resettlement, humanitarian assistance).
- Improved thermal and structural performance of new shelters reduces respiratory illnesses and heat stress, with treatment costs estimated at USD 15–25 per case in local health centres; for a target population of around 19,800 people, a 10% reduction in heat- and humidity-related consultations represents approximately USD 30,000–40,000 in annual healthcare savings.
- The planting of 10,000 trees improves thermal comfort (2–4°C reduction), stabilizes soils, and reduces erosion-related damage, avoiding annual repair costs estimated at USD 20,000–40,000 in the most exposed sites.

In contrast, the project proposes an integrated approach combining climate-informed territorial planning, bioclimatic shelter solutions, ecosystem restoration, and institutional strengthening. This approach sustainably reduces exposure to climate hazards, limits repeated damage to infrastructure and shelter, and decreases future costs related to emergency response and repairs. For example, well-designed bioclimatic shelters adapted to Sahelian conditions reduce vulnerability to heat and flooding, while lowering maintenance needs and household asset losses. Similarly, integrating climate risks into land-use planning helps avoid construction in flood- or erosion-prone areas, reducing future costs linked to secondary displacement and reconstruction.

The project further enhances cost-effectiveness by combining physical investments (“hard adaptation”) with institutional measures (“soft adaptation”). Capacity-building, development of bioclimatic standards, and integration of climate risks into planning tools ensure that investments made today continue to generate long-term benefits. By institutionalizing adaptation within regulatory frameworks and planning practices, the project avoids maladaptation and safeguards future public investments.

Economic efficiency is also maximized through the use of local materials, regional value chains, and context-appropriate technical solutions. Locally available materials and small-scale production units reduce transport costs and stimulate the local economy.

The project’s cost-effectiveness is further strengthened by leveraging existing institutional structures and partnerships. Implementation will build on established collaboration between UN-Habitat, UNHCR, and national and local authorities in eastern Chad, avoiding the creation of parallel systems and reducing administrative and transaction costs. Activities will also benefit from existing tools and operational experience, including planning methodologies tested in Farchana and technical solutions documented through UNHCR’s Shelter and Sustainability

platform.

Moreover, the project relies heavily on in-house technical expertise from partner agencies, reducing dependence on costly external consultants. UN-Habitat brings recognized expertise in urban planning, sustainable shelter, and resilient infrastructure, while UNHCR contributes extensive operational experience in managing refugee settlements and developing context-appropriate shelter solutions. This complementarity ensures efficient implementation while strengthening national and local capacities, generating lasting benefits beyond the project's duration.

Finally, without Adaptation Fund financing, the proposed investments would be unlikely to be implemented at the required scale or in a truly climate-informed manner. Public resources in Chad are highly constrained and largely allocated to immediate humanitarian needs and climate emergencies. Local authorities operate with limited budgets, primarily focused on crisis response and damage repair rather than preventive adaptation investments. As a result, climate risks are typically managed through reactive measures such as rebuilding shelters or repairing infrastructure after each extreme event.

Adaptation Fund support will enable a shift from reactive responses to a proactive climate adaptation strategy by financing structural investments that reduce exposure, strengthen settlement resilience, and lower future disaster-related costs. By promoting planned, durable, and scalable solutions, the project will help break the cycle of repeated damage and costly reconstruction, while delivering long-term adaptation benefits for displaced populations and host communities in eastern Chad.

2.4. Consistency with National Sustainable Development and Adaptation Strategies.

The programme is fully aligned with Chad's national priorities on climate resilience, territorial development, and forced displacement management, as outlined in the National Adaptation Plan (NAP), sectoral development strategies, and commitments made at the 2023 Global Refugee Forum (GRF).

- **Chad's National Adaptation Plan** identifies key priorities including reducing the vulnerability of human settlements exposed to flooding, erosion, and extreme temperatures; improving shelter in rural areas; and promoting local materials and resilient construction techniques to address increasing climate impacts. The programme directly responds to these priorities by targeting eastern provinces—Ouaddaï, Sila, Wadi Fira, Ennedi Est—where shelters are frequently damaged by heavy rains, strong winds, and extreme heat, and by promoting climate-adapted shelter solutions based on local materials (adobe, fired bricks, compressed earth blocks).
- The project is also consistent with Chad's climate change adaptation commitments as outlined in its **Nationally Determined Contribution (NDC) under the UNFCCC**. The NDC identifies adaptation as a national priority and highlights the need to strengthen resilience in highly vulnerable sectors, including agriculture, water resources, land-use planning, and human settlements. The project directly addresses these priorities by reducing exposure to climate hazards, improving natural resource management, and integrating climate considerations into territorial and urban planning. Beyond alignment with the existing NDC, the project also constitutes a timely entry point for contributing to the preparation of Chad's NDC 3.0, which has not yet been submitted. Component 3 will explore opportunities to strengthen the urban and displacement-sensitive content of the NDC 3.0 — drawing on the planning frameworks, vulnerability assessments, and shelter performance evidence generated by this project — thereby helping to translate site-level adaptation gains into national climate policy commitments.
- **Chad Connection 2030** - National Development Plan 2025–2030 (PND) serves as Chad's main strategic framework for the coming decade. It prioritizes strengthening economic, social, and environmental resilience; infrastructure development; improved territorial governance; and poverty reduction. It emphasizes the development of resilient infrastructure, territorial planning, and sustainable urbanization as

key drivers of economic and social transformation. The project's interventions on climate-resilient shelter and urban planning directly support this vision by structuring safer, better-planned settlements capable of withstanding climate hazards, while improving access to essential services and reducing environmental risks.

- The project is aligned with the **National Spatial Planning Strategy (SNAT 2014–2035)**, which aims to guide more balanced and sustainable spatial development. The SNAT highlights the need for improved planning of human settlements, strengthened territorial infrastructure, and integration of environmental and climate considerations into land-use planning. The project contributes to operationalizing these objectives by integrating climate risks into local development plans, developing climate-informed planning tools, and strengthening the capacities of provincial and municipal authorities.
- Furthermore, the **National Climate Change Action Plan (PNACC)** explicitly recommends the systematic integration of climate data into urban planning decisions and the promotion of low-carbon shelter solutions. The programme operationalizes these recommendations through local compressed earth block (CEB) production units, reduced reliance on fuelwood, and the design of shelter adapted to Sahelian climate conditions.
- The project also supports government efforts to strengthen the management of **displacement in eastern Chad, particularly through national coordination frameworks for the response to Sudanese refugees and Chadian returnees**. Authorities have emphasized the need to transition from purely humanitarian responses toward more sustainable approaches that integrate territorial development, climate resilience, and refugee inclusion in local systems. By improving planning in hosting areas, reducing pressure on natural resources, and supporting resilient infrastructure and shelter, the project directly contributes to this transition.
- It also reinforces the implementation of the **2020 Asylum Law and the Host Area Development Plan**, which call for integrating refugees into national systems and improving essential infrastructure in hosting areas. Chad's 2020 Asylum Law establishes a comprehensive legal framework for refugee protection, granting refugees the right to residency, freedom of movement, access to public services, and the right to work — creating the legal foundation for local integration and durable solutions. Implementation is coordinated by the Commission Nationale d'Accueil et de Réinsertion des Réfugiés et Rapatriés (CNARR), operating under the Ministry of Foreign Affairs, in close partnership with UNHCR. An implementing decree is currently being finalised to operationalise key provisions of the law. This framework constitutes a critical pre-condition for the sustainability of the proposed project, as it legitimises the inclusion of refugees in territorial planning processes and public infrastructure investments, and provides the institutional basis for post-project handover to national systems.
- Finally, Chad made several key commitments at the **Global Refugee Forums (2019 and 2023)** to strengthen resilience and infrastructure in refugee-hosting areas. The programme directly contributes to these commitments, particularly those related to:
 - o improving living conditions in camps,
 - o promoting planned urbanization of hosting areas,
 - o and developing climate-resilient infrastructure accessible to both refugees and host communities.

2.5. Compliance with National Technical Standards and Adaptation Fund Environmental and Social Policy

The programme fully complies with Chad's national technical standards as well as the Adaptation Fund's Environmental and Social Policy (ESP). The proposed activities—territorial planning, construction of climate-resilient shelter, local production of materials, and drainage works—are aligned with national requirements on urban

planning, environmental management, and the safety of human settlements.

At the national level, the project adheres to construction and planning standards set by the Ministry of Territorial Planning, Urban Development and Shelter, particularly regarding structural stability, siting outside flood-prone areas, erosion risk reduction, and the use of materials consistent with local practices. The intervention specifically promotes materials that are locally approved and widely used at community level, whose characteristics, performance, and limitations are well known in eastern regions, as outlined in technical documentation on shelter and construction materials.

The proposed prototypes also integrate best national practices in drainage, foundations, stormwater management, and natural ventilation, which are essential in environments characterized by heavy rainfall, strong winds, wadis, and extreme heat. The integration of tree planting and durable materials further contributes to reducing pressure on natural resources, in line with national environmental standards and climate commitments.

With regard to the Adaptation Fund’s Environmental and Social Policy (ESP), the programme meets the key requirements:

- **“Do no harm” principle:** All project activities are designed to prevent, avoid, minimize, and mitigate significant adverse and negative impacts on the environment, livelihoods, biodiversity, and human health and wellbeing, in line with Adaptation Fund Environmental and Social Policy requirements and UN-Habitat risk-informed urban programming approaches.
- **Sustainable natural resource management:** Local production of compressed earth blocks (CEB) reduces deforestation and substitutes timber-based construction materials such as wood for roofing, thereby supporting low-carbon and resource-efficient building practices.
- **Protection of vulnerable groups:** Women, persons with disabilities, and at-risk households are explicitly targeted and prioritized through inclusive targeting and participatory beneficiary selection mechanisms, ensuring equitable access to assistance while reducing exclusion risks and strengthening protection outcomes in line with Adaptation Fund Gender and Social Safeguards requirements.
- **Community participation:** Host communities, refugees, traditional authorities, and local committees are involved in inclusive and transparent beneficiary selection, site and settlement selection, planning and infrastructure management, in line with established procedures and institutional arrangements (in collaboration with CNARR, community leaders, civil society, and implementing partners) ensuring accountability, social inclusion, and strengthened local ownership in decision-making.
- **Proportionate environmental and social assessment:** Each sub-project (CEB units, site development, drainage works) will be subject to proportionate environmental and social screening and impact assessment in accordance with national procedures and Adaptation Fund Environmental and Social Policy requirements, ensuring early identification, avoidance, minimisation, and mitigation of environmental, social, and climate-hazard related risks, and the integration of appropriate safeguard measures into design and implementation.

Project component	Relevant rules, regulations, standards and procedures	Compliance, procedures and authorizing offices
1 – Climate-sensitive territorial and urban planning	National planning and climate policy frameworks including Chad Connection 2030, the National Development Plan (PND 2025–2030), and the National Territorial Planning Strategy (SNAT 2026–2040).	The project will work closely with the Ministry of Territorial Planning, Urban Development and Housing (MATUH) and provincial authorities to integrate climate risk data into spatial planning tools and territorial development frameworks.
2 –Deployment of climate-resilient shelter and settlement infrastructure	National legislation related to environmental management, land use and construction; national planning frameworks; recognized good practices for climate-resilient infrastructure applied by development partners (e.g., World Bank and African Development Bank	All construction activities will follow national permitting procedures and be reviewed by competent authorities. Environmental and social screening will be conducted and mitigation measures implemented in line with the Adaptation Fund ESP . Technical designs will incorporate climate-resilient

3 – Institutional strengthening and integration of climate adaptation into planning frameworks	guidance for Sahelian environments). National climate and development strategies including the NDC , NAP processes , PND , and SNAT .	standards adapted to the Sahelian context. The project will support national and local institutions in integrating climate risk considerations into regulatory frameworks, planning instruments and construction standards to ensure long-term compliance with national policies.
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2.6. Complementarity with Existing Interventions and Avoidance of Duplication.

The programme does not duplicate existing interventions; rather, it complements them and addresses clearly identified gaps in the current humanitarian response in eastern Chad. Humanitarian partners, including UNHCR, primarily provide emergency shelters (tarpaulins, tents, straw) with a very limited lifespan (6 to 12 months), which remain highly vulnerable to extreme heat, heavy rainfall, and strong winds. To date, no initiative finances large-scale durable shelter solutions or integrated systems for climate-informed territorial planning, drainage, or ecosystem stabilization.

Humanitarian funding is largely oriented toward emergency response and does not cover the structural investments required to develop climate-resilient infrastructure or sustainable shelter models. Similarly, existing programmes do not support the local production of durable materials, systematic tree planting, or the integration of climate risks into the planning of hosting areas.

The project also complements commitments made at the Global Refugee Forum (GRF 2023), which call for strengthened resilience and infrastructure in regions hosting large refugee populations. However, these commitments currently lack financing mechanisms for large-scale operational implementation. The proposed programme therefore serves as a catalytic instrument to translate these commitments into concrete action.

The proposed project is furthermore directly anchored in, and builds upon, two ongoing UN-Habitat initiatives in the target area that together constitute an operational and technical foundation for the Adaptation Fund investment. First, UN-Habitat has developed and tested an integrated territorial planning methodology in Farchana (Ouaddaï province), producing a spatial planning framework that identifies priority investment zones, infrastructure gaps, and climate-exposed areas within the refugee-hosting settlement system. This planning work — undertaken in partnership with national and local authorities — provides the spatial backbone upon which Component 1 of the proposed project will scale up climate-informed land-use planning.

Second, UN-Habitat is currently implementing a FCDO-funded pilot project in Farchana focused on the identification and validation of a sustainable, climate-resilient bioclimatic shelter model adapted to the Sahelian context. The pilot is designed to test both the physical performance and the economic viability of locally produced durable shelter solutions — including the identification of replicable business models that can be financed through local resources and scaled without dependency on external humanitarian funding. Results of the pilot study are expected by end of December 2026. The proposed Adaptation Fund project is explicitly sequenced to build on these findings: Component 2 will use the pilot's technical and economic evidence base to move from proof-of-concept to structured implementation and scale-up, deploying validated shelter typologies and production models across a significantly larger number of households and localities. Together, these two UN-Habitat initiatives — the Farchana territorial planning framework and the FCDO shelter pilot — eliminate the need to start from scratch and significantly reduce implementation risk, while ensuring that Adaptation Fund investments are grounded in operationally tested approaches.

In summary, the project neither replaces nor duplicates existing interventions; it introduces structural, climate-resilient, and long-term solutions that are currently absent from humanitarian and development financing in eastern Chad.

Project/Programme	Implementing partner(s) & dates	Focus/ Activities	Location	Complementarity with the proposed project
Transition Development Assistance (TDA): Integrated water systems, markets, and human settlements support for refugees and host communities in Arne-Guereda & Iriba, Wadi Fira, Chad.	UN-Habitat (03-12/2026)	Promote integrated urban and territorial planning and strengthen the capacity of local authorities to better manage rapidly growing settlements and provide long-term services to both refugees and host communities.	Arne-Guereda & Iriba	The BMZ-funded project supports capacity strengthening of local authorities for spatial planning and territorial development. These interventions directly reinforce the proposed project by providing the institutional and planning framework required to scale up integrated investments in resilient human settlements
Integrated Territorial Planning in Farchana Refugee-Hosting Area	UN Habitat (09/2025 – 03/2026)	Development and operationalization of a spatial planning framework for the Farchana refugee-hosting settlement system, identifying priority investment zones, infrastructure gaps, and climate-exposed areas in partnership with national and local authorities.	Farchana, Ouaddai province	This initiative constitutes the direct planning foundation for Component 1 of the proposed project. The Farchana territorial planning methodology — already tested and locally validated — will be scaled up and replicated in additional climate-exposed localities under the Adaptation Fund investment, avoiding duplication while ensuring methodological continuity and institutional anchoring.
FCDO-funded Bioclimatic Shelter Pilot — Farchana	UN Habitat (07 - 12/2026)	Pilot identification and validation of a locally produced, climate-resilient bioclimatic shelter model adapted to the Sahelian context, including assessment of physical performance and economic viability. Pilot results expected December 2026.	Farchana, Ouaddai	This pilot constitutes the technical and economic proof-of-concept for Component 2 of the proposed project. Rather than duplicating the pilot, the Adaptation Fund investment is explicitly sequenced to build on its findings — deploying validated shelter typologies and replicable production models at scale, with the ambition of transitioning from a pilot economic model to a structured, locally financed, and scalable shelter system accessible to both refugee and host households.
Semi-durable shelters/ARADA	UNHCR (02 - 12/2026)	Construction of semi-durable shelters	Ouaddai, Sila	The focus is on non-resilient shelter structures, with a notable gap in climate adaptation

considerations.

Expanding Lighting and Infrastructures to Strengthen the Resilience of Sudanese Refugees Project in the Republic of Chad: WASH, Shelter, Streetlights	Shelter, Water, to the	UNHCR 04 - 12/2026)	Construction of semi-durable shelter	Eastern Chad	The proposed project will scale up existing interventions, expanding their reach and impact while promoting resilient shelter solutions adapted to climate risks.
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2.7. Learning and Knowledge Management to capture and disseminate lessons learned.

The programme will generate evidence on climate-informed planning, bioclimatic shelter, ecosystem restoration, and local materials, while also documenting community participation and gender-sensitive approaches. A monitoring, evaluation, and learning (MEL) framework will track effectiveness, cost-efficiency, and social acceptability, with data disaggregated by gender, household type, and refugee/host status where possible. Results will inform adaptive management and continuous improvement throughout implementation.

The project builds on existing tools from UN-Habitat and UNHCR and will document all interventions — design, costs, performance, and social outcomes — to identify scalable solutions. Findings will be shared with national authorities, partners, and through global platforms to support policy uptake and replication.

The programme will systematically draw on, and contribute back to, the methodological and operational knowledge base developed under UN-Habitat's RISE UP flagship programme (Resilient Settlements for the Urban Poor), implemented with support from AECID, the UN 2030 Agenda Sub-Fund, Sida, the Adaptation Fund, and the Green Climate Fund. RISE UP has mobilized over USD 150 million across a global portfolio of urban climate resilience interventions in vulnerability hotspots across Africa, Asia, Latin America, and the Middle East, generating a substantial body of transferable lessons on three dimensions that are directly relevant to the Chad programme.

First, on participatory vulnerability assessment: RISE UP developed and field-tested the Multilayered Vulnerability Assessment (MVA) methodology across multiple country contexts — including Jordan, Tunisia, Ethiopia, Madagascar, Malawi, and Solomon Islands — demonstrating how overlapping climate, urban, and biodiversity vulnerabilities can be mapped and prioritized in partnership with local authorities and communities. In Ethiopia (Debre Berhan), for instance, the MVA was applied in a context of rapid urbanization, informal settlement growth, and significant internally displaced population — a profile with strong parallels to the eastern Chad context. The identification of bankable, gender-inclusive climate projects directly feeding into local development plans and climate strategies provides a directly applicable model for Component 1 of the proposed project.

Second, on locally led capacity building: RISE UP's Training of Trainers (ToT) approach — delivered to over 60 participants from countries including Ethiopia, Jordan, Tunisia, and Madagascar — has demonstrated how subnational government officials and technical staff can be equipped with practical skills in multidimensional vulnerability assessment, GIS-based spatial analysis, and gender- and equity-sensitive resilience planning. This approach will inform the design of Component 3 capacity-building activities, particularly the training of provincial and municipal authorities in climate risk integration and risk-informed planning.

Third, on nature-based solutions in informal settlements: RISE UP's piloting of nature-based solutions (NbS) in Malawi, Madagascar, and Solomon Islands — including vegetative cover restoration, ecological corridor development, and community-managed green infrastructure — provides relevant methodological references for the ecosystem restoration measures embedded in Component 2 of the proposed project, particularly the integration of shading, soil stabilization, and drainage management around shelter sites.

While the geographic and displacement contexts of RISE UP partner cities differ from eastern Chad, the programme's core methodological contributions — evidence-based participatory assessment, locally owned investment prioritization, and integration of climate resilience into subnational planning frameworks — are directly transferable. The proposed project will document its own implementation experience in a format compatible with RISE UP's global knowledge architecture, enabling cross-learning and contributing to the broader evidence base on climate-resilient urban development in fragile and displacement-affected contexts.

By embedding knowledge management within institutions and partner networks, the programme strengthens Chad's long-term capacity to scale climate-resilient solutions in displacement-affected areas, while contributing to global knowledge on adaptation in fragile Sahelian contexts.

2.8. Stakeholder Consultation Process and Gender-Responsive Engagement

Stakeholder	Date of consultation	Consultation objective	Outcome	Remark
Great Green Wall Agency (AGMV) / Ministry of Environment and Fisheries	13 October 2025	Align the programme's ecosystem restoration and nature-based solutions components (reforestation, soil stabilization, agroforestry) with the Great Green Wall national strategy and environmental regulatory framework; ensure consistency with national biodiversity and land restoration commitments; identify entry points for coordination and co-investment in eastern Chad.	Strong institutional interest expressed in the programme's nature-based solutions approach. Convergence identified between the proposed ecosystem restoration activities and the Great Green Wall's priority intervention zones in Wadi Fira and Ouaddaï. Agreement to explore formal coordination mechanisms at full proposal stage. Environmental permitting requirements and relevant national standards confirmed.	First consultation. Stakeholders expressed willingness to participate in the programme's multi-stakeholder coordination mechanism (Component 3).
Ministry of Territorial Planning, Urban Development and Housing (MATUH)	5 May 2026	Present the integrated territorial planning approach and the proposed MVA methodology; validate the consistency of proposed interventions with national urban planning frameworks (Chad Connection 2030, SNAT 2026–2040, PND 2025–2030); confirm institutional arrangements for Component 1 and Component 3; discuss integration of bioclimatic standards into national building codes and regulatory frameworks.	Formal endorsement of the territorial planning approach and confirmation of MATUH's role as primary institutional counterpart for Components 1 and 3. Validation of the MVA methodology as consistent with national planning instruments. Agreement on the need to integrate climate-resilient zoning and bioclimatic construction standards into existing regulatory frameworks. MATUH expressed commitment to participate in the multi-	First consultation. MATUH confirmed its willingness to co-develop the implementing guidelines for Output 3.1.2. Follow-up meeting to be organized at full proposal stage.

Stakeholder	Date of consultation	Consultation objective	Outcome	Remark
MATUH / Great Green Wall Agency (AGMV)	12 June 2026	Final review of the concept note prior to submission; validate the completeness and accuracy of the national policy alignment section; confirm institutional arrangements and letters of endorsement; review the environmental and social risk screening and ensure consistency with national standards.	stakeholder coordination mechanism. Concept note reviewed and endorsed by both institutions. Minor clarifications incorporated into the final version. Institutional commitment to the programme confirmed. Letters of endorsement to be finalized prior to submission to the Adaptation Fund Board.	Second and final consultation with these stakeholders prior to concept note submission. Both institutions confirmed availability for continued engagement during full proposal development.

2.9. Justification for funding requested & full cost of adaptation reasoning.

This project demonstrates a clear full cost of adaptation rationale, as it addresses the incremental costs required to shift from basic humanitarian shelter provision to climate-resilient, locally led shelter and settlement solutions in a context of increasing climate impacts, displacement, poverty, and fragility. It explicitly responds to growing climate-hazard related loss and damage affecting refugee and host communities, where recurrent extreme weather events are already destroying shelters and eroding household assets. The intervention is grounded in Locally Led Adaptation principles, ensuring that communities, local authorities, and local producers are central to designing, producing, and maintaining resilient shelter systems that reduce long-term vulnerability and dependency on emergency assistance.

The requested funding covers the critical, incremental and additional costs required to enable genuine climate adaptation and the increasing impacts of climate-induced loss and damage in refugee-hosting areas of eastern Chad, where current shelters—made of tarpaulin, straw, or tents—are not designed to withstand heavy rainfall, strong winds, or extreme heat. The recurrent loss and damage of shelters, shelter, household assets, community infrastructure, basic living conditions, and livelihoods observed each year clearly shows that the current baseline approach and existing solutions are neither durable, resilient, nor economically sustainable. Without adaptation financing, the most vulnerable and at-risk communities will remain dependent on a costly, unstable model that is highly vulnerable to climate shocks.

Support from the Adaptation Fund will finance investments that would not otherwise occur: climate-resilient materials, drainage systems, local production of compressed earth blocks (CEB), technical capacity-building, and ecosystem-based solutions. These elements represent essential additional costs to reduce climate exposure, improve shelter durability, and break the cycle of annual repairs that heavily strain humanitarian resources.

A key component of the funding is the feasibility study, which will play a critical role in transforming the current model. It will identify, test, and validate climate-adapted shelter solutions suited to the Sahelian context, based on local materials, low carbon footprint, improved thermal performance, and a viable economic model. This will enable a shift toward a more stable, affordable, and sustainable approach—reducing reliance on emergency responses and easing pressure on overstretched systems.

Overall, the funding supports the full cost of adaptation by enabling a transition from reactive responses to long-term resilience. Without it, refugee and host communities would remain limited to fragile and costly solutions, unable to cope with increasing climate impacts.

Outputs	Vulnerability Baseline	Adaptation Resulting from the Project	Benefit	Alternative Scenario
Climate-sensitive territorial and urban planning in refugee-hosting areas	Settlement expansion in Eastern Chad occurs largely without climate-informed planning. Refugee camps and host communities are often located in flood-prone areas, along wadis or in poorly drained zones, increasing exposure to flooding, erosion, and extreme heat. Local authorities have limited access to climate risk data and spatial planning tools.	Multi-hazard risk mapping and climate-informed territorial planning will guide settlement expansion toward safer locations. Local authorities will be equipped with tools and capacities to integrate climate risks into land-use planning, reducing exposure of settlements and infrastructure to floods, erosion, and extreme heat.		Without the project, settlement growth will continue in hazard-prone areas, increasing exposure to climate risks and leading to repeated damage to shelters and infrastructure, higher humanitarian costs, and greater risk of secondary displacement.
Deployment of climate-resilient bioclimatic shelter solutions	Current shelters are mainly emergency structures made of tarpaulins, straw, or temporary materials with a lifespan of 6–12 months. These shelters provide little protection against extreme heat, heavy rainfall, or strong winds and are frequently damaged during seasonal storms.	Deployment of climate-resilient bioclimatic shelter using locally appropriate materials will reduce exposure to extreme heat, floods, and erosion. Improved designs will enhance thermal comfort, structural durability, and environmental sustainability while reducing the need for repeated reconstruction.		Without Adaptation Fund support, humanitarian actors will continue relying on short-lived emergency shelters, leading to recurring losses, poor living conditions, and continued pressure on natural resources for reconstruction materials.
Local production of sustainable construction materials and ecosystem restoration	Construction materials are often scarce and expensive, and reliance on wood and unsustainable materials contributes to deforestation and land degradation around refugee settlements. Ecosystem degradation further increases vulnerability to erosion and flooding.	Local production of compressed earth bricks (BTC) and other durable materials will reduce dependence on wood and strengthen local value chains. Tree planting, soil stabilization, and nature-based solutions will improve microclimates, reduce erosion, and restore ecosystem functions around settlements.		Without the project, unsustainable material use and environmental degradation will continue, further weakening ecosystems and increasing the vulnerability of settlements to climate hazards.
Integration of climate adaptation into institutional and regulatory frameworks	Climate risks are insufficiently integrated into urban planning, shelter standards, and settlement management. Institutional capacities for climate-resilient planning remain limited at national and subnational levels.	The project will strengthen institutional capacities and support the integration of climate adaptation into planning tools, construction standards, and regulatory frameworks. This will enable long-term scaling of climate-resilient settlement planning beyond the project sites.		Without these interventions, climate risks will remain insufficiently integrated into planning and construction practices, leading to continued maladaptation and inefficient public investments.

2.10. Sustainability of the programme outcomes

Sustainability is a core principle of the programme, ensuring that benefits extend well beyond the funding period through an integrated approach covering technical, institutional, social, environmental, and economic dimensions, including clear provisions for long-term operation, maintenance, and local ownership of assets.

The sustainability approach is adapted to the distinct profiles of the two target provinces. In **Wadi Fira** (Guéréda), proximity to the Sudanese border and ongoing insecurity require conflict-sensitive implementation modalities and flexible exit strategies; sustainability measures therefore prioritise community-based ownership and local authority anchoring that can function independently of humanitarian presence. In **Ouaddaï** (Farchana/Hadjer Hadid), where displacement is more protracted and a territorial planning baseline already exists, sustainability relies on deeper integration into municipal planning systems and the replication of the existing Farchana methodology.

Technical sustainability: The programme replaces short-lived shelters with durable, climate-resilient shelter and nature-based solutions (e.g. tree planting) to stabilize soils, improve microclimates, and reduce erosion and runoff, thereby reducing long-term exposure and vulnerability to climate hazards and the need for repeated repair, relocation, and reconstruction.

Institutional sustainability: It is embedded within national and local institutions (including the Ministry of Territorial Planning and CNARR), strengthening capacities and integrating climate-informed planning and bioclimatic standards into long-term practices and regulatory frameworks, supporting institutionalization of climate-resilient settlement planning beyond the project cycle.

Social sustainability: Strong community participation—including women, vulnerable households, persons with disabilities, refugees, elders, community leaders, civil society —ensures solutions are adapted to local needs, fostering ownership, social cohesion, and long-term acceptance thereby reinforcing locally led adaptation and sustained community stewardship of infrastructure and natural resources.

Environmental sustainability: Use of local, low-impact materials (e.g. CEB) reduces deforestation, while reforestation, soil stabilization, and water management restore ecosystems and reduce climate risks, contributing to long-term ecosystem, biodiversity and habitat regeneration, and reduced environmental degradation pressures.

Economic sustainability: Local production units and training of artisans create sustainable value chains, reduce costs, and support local economies, while decreasing recurrent repair and humanitarian costs, and enabling gradual transition from external assistance to locally sustained climate-resilient livelihoods.

Infrastructure sustainability: All infrastructure (shelter, drainage, ecosystem measures) is designed to be durable, low-maintenance, and locally manageable, with clear responsibilities for upkeep shared between communities and authorities, supported by strengthened local capacity and agreed maintenance arrangements to ensure post-project continuity and functionality. Shelter prototypes will be designed from the outset for maintainability — prioritising locally available materials, simple construction techniques replicable by trained local artisans, and minimal dependency on imported components or specialised equipment. The feasibility study will explicitly assess maintenance requirements and map local supply chains for key materials. Community-based maintenance arrangements, including small artisan cooperatives or community maintenance committees, will be established during implementation and handed over to local authorities and communities before project closure, with documented maintenance protocols adapted to local capacity levels.

2.11. Environmental and social impacts and risks identified as being relevant to the programme.

Environmental and Social Principle	No further assessment required for compliance	Potential impacts and risks – further assessment and management required for compliance
1. Compliance with the Law	✓ Project activities will comply with national legislation related to	Limited risk of non-compliance if permitting procedures are not properly followed. Environmental and social screening and coordination with relevant authorities will ensure compliance.

	environmental protection, land use, urban planning and construction.	
2. Access and Equity		Risk of unequal access to project benefits or unequal participation in decision-making processes. Moreover, pilot intervention involve by default exclusion of other members of the community: mitigation strategy to be stabilized.
3. Marginalized and Vulnerable Groups		Risk that vulnerable groups (women, persons with disabilities, elderly, refugees or vulnerable host households) are not adequately represented in consultations or benefit distribution.
4. Human Rights	✓ Project design promotes inclusive participation and equitable access to project benefits.	Limited risk if participation processes are not sufficiently inclusive.
5. Gender Equality and Women's Empowerment		Risk that women are underrepresented in consultations, decision-making processes or employment opportunities.
6. Core Labour Rights		Risk of unsafe working conditions during construction or possible small-scale material production activities, but also procurement processed.
7. Indigenous Peoples / Ethnic Groups		Beyond the host-refugee axis, the project therefore monitors two relationship dimensions: (i) among host communities themselves, and (ii) between host populations and Sudanese refugees. Consistent with its do-no-harm approach, the project aims to minimise the risk of exacerbating either, rather than to resolve pre-existing tensions over which it has limited leverage. Safeguards include functional (non-ethnically-labelled) framing of dynamics in all public materials, transparent 60/40 targeting, inclusive siting consultations involving women from all groups, mixed-community committees with dispute-resolution training, and monitoring of tension indicators with adaptive management. A detailed analysis is provided in the conflict-sensitivity analysis / SEP.
8. Involuntary Resettlement		Risk that small infrastructure works (e.g. drainage improvements) could affect land use if not carefully designed. However, the project may support the development of settlements or infrastructure in areas hosting relocated refugee populations. There is therefore a potential risk that population movements or settlement planning processes could lead to involuntary displacement, land-use conflicts, or unequal access to land if not carefully managed. Further assessment will ensure that any relocation processes are voluntary, coordinated with national authorities (including CNARR) and humanitarian partners, and conducted in accordance with national regulations and international protection standards. Site selection and planning will prioritize exposure to climate hazards, available land and minimize risks of economic displacement for host communities.
9. Protection of		Construction or drainage works could temporarily affect

Natural Habitats		vegetation or natural habitats. Sites yet to be identified therefore impacts on natural areas to be considered.
10. Conservation of Biological Diversity		Temporary disturbance of vegetation or local biodiversity during construction activities.
11. Climate Change	✓ Project activities aim to strengthen resilience.	Minor greenhouse gas emissions could occur during construction activities.
12. Pollution Prevention and Resource Efficiency		Risk of dust, noise, construction waste or improper disposal of materials during construction or potential small-scale production of construction materials (to be assessed during the feasibility study).
13. Public Health		Construction activities may create temporary health or safety risks (dust, noise, stagnant water).
14. Physical and Cultural Heritage	✓ No known heritage sites are expected to be affected.	Limited risk if unknown cultural heritage sites are encountered during works.
15. Lands and Soil Conservation		Risk of soil erosion or instability during excavation or drainage works.

Checklist of environmental and social principles	No further assessment required for compliance	Potential impacts and risks – further assessment and management required for compliance
Compliance with the Law		x
Access and Equity		x
Marginalized and Vulnerable Groups		x
Human Rights		x
Gender Equality and Women's Empowerment		x
Core Labour Rights		x
Indigenous Peoples	x	
Involuntary Resettlement		x
Protection of Natural Habitats		X
Conservation of Biological Diversity		X
Climate Change		x

Pollution Prevention and Resource Efficiency

x

Public Health

x

Physical and Cultural Heritage

x

Lands and Soil Conservation

x

PART III. IMPLEMENTATION ARRANGEMENTS

Demonstrate how the project/programme aligns with the Results Framework of the Adaptation Fund

Project Objective(s) ¹	Project Indicator(s)	Objective	Fund Outcome	Fund Indicator	Outcome	Grant Amount (USD)
Strengthen climate resilience in refugee-hosting areas through (i) climate-sensitive urban planning, (ii) climate-resilient shelter solutions, and (iii) strengthened local capacities	• Number of localities with climate-sensitive plans (2–3) • Number of households with climate-resilient shelters (estimate: 1000) • Reduction in shelter damage (estimate: >60%)	Outcome 4: Increased adaptive capacity within development planning	Outcome 2: Strengthened institutional capacity	4: 4.1 / 4.2 / 2.1		USD 10 000 000
Project Outcome(s)	Project Indicator(s)	Outcome	Fund Output	Fund Indicator	Output	Grant Amount (USD)
Outcome 1 / Component 1 — Climate-sensitive urban and territorial planning	• 2–3 multi-hazard maps produced and validated • 2–3 land-use plans integrating climate risks adopted		Output 7: Climate-resilient planning tools and information systems developed	7.1.1 Sectoral planning documents updated to incorporate climate change risks		USD 1 253 421,00
Outcome 2 / Component 2 — Climate-resilient shelter solutions (feasibility study, economic models, and deployment)	• Feasibility study completed • Economic models and value chains identified • estimated 1,000 households benefiting from climate-resilient shelters • Significant reduction in indoor temperature (estimated –6 to –12°C)		Output 4: Physical assets strengthened to withstand climate change and variability-induced stress	4.2.1 Physical infrastructure improved to withstand climate change impacts		USD 6 327 942,00 + PFG
Outcome 3 / Component 3 — Institutional capacity building and coordination	• Approx. 300 institutional actors trained • Multi-stakeholder coordination mechanism established • Climate-sensitive norms/tools integrated into national frameworks		Output 2: Institutional capacity strengthened for climate change adaptation	2.1.1 Number of institutions with strengthened capacity for adaptation planning and implementation		USD 835 614,00

PART IV. APPROVAL BY THE GOUVERNEMENT AND CERTIFICATION BY THE IMPLEMENTING ENTITY

Republic of Chad
Ministry of the Environment, Fishery
and Sustainable Development
Great Green Wall Agency of Chad
Designated Authority
N° 017/RC/MEPSD/GGWA/DA/2026



ADAPTATION FUI

Letter of Endorsement by Government

N'Djamena, June 22, 2026

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

Subject: Endorsement for Enhancing climate resilience of displacement affected communities in Chad.

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

Accordingly, I am pleased to endorse the above project proposal with support from the Adaptation Fund. If approved, the project will be implemented by UN-Habitat and executed by Ministry of Environment, Fishery and Sustainable Development, Ministry of Planning, Urbanism and Habitat, and United Nations Higher-Commission for Refugees.

Sincerely,

M. Kodou Choukou Tidjani

*Directeur Général de l'Agence Nationale de la Grande Muraille Verte du Tchad
(ANGMVT) et Autorité Désignée – Fonds pour l'Adaptation
Quartier Ndjari, Rue André Mougnan, N'Djamena, Tchad
Email : kodou.cht@gmail.com
Contact : +235 66 27 77 42*

REPUBLIC OF CHAD

MINISTRY OF THE ENVIRONMENT, FISHERIES AND
SUSTAINABLE DEVELOPMENT

GENERAL SECRETARIAT

GENERAL DIRECTORATE OF THE NATIONAL
AGENCY OF THE GREAT GREEN WALL (ANGMV)

N° 009 /PR/MEPDD/SG/DGANGMV/2026

N'Djamena, August 10, 2026



Unity - Work - Progress

Subject: Endorsement of the “Strengthening the Climate Resilience of Displacement-Affected Communities in Eastern Chad”

In my capacity as the National Designated Authority to the Adaptation Fund for the Republic of Chad, I hereby confirm that the aforementioned project proposal aligns with the national priorities of the Government of Chad regarding climate change adaptation and contributes to efforts of the country, aiming to reduce the adverse effects and risks associated with climate variability and change.

The project is aligned with Chad’s national adaptation frameworks, including its Nationally Determined Contribution (NDC) and its National Adaptation Plan (NAP). It also addresses the key vulnerabilities faced by communities affected by displacement in the Wadi Fira and Ouaddaï provinces.

Therefore, I am pleased to officially endorse this project proposal for funding from the Adaptation Fund. If approved, the project will be implemented by UN-Habitat as the Implementing Entity, in partnership with the Office of the United Nations High Commissioner for Refugees (UNHCR) and the Chadian National Agency for the Great Green Wall (ANGMVT). In this regard, the Government of Chad also expects the Ministry of Territorial Development, Urban Planning and Housing, as well as other relevant government institutions, to be closely involved in the project's implementation.

I fully encourage the partners responsible for the project's implementation and execution and look forward to its forthcoming approval and successful implementation. Please accept,

The National Focal Point for the Adaptation Fund

The Director General of the Great Green Wall

TAHAR ALLA TCHIGALMA



CERTIFICATION BY THE IMPLEMENTING ENTITY

I certify that this proposal has been prepared in accordance with the guidelines provided by the Adaptation Fund Board and current national development and adaptation plans (National Adaptation Plan (NAP) - 2022, Nationally Determined Contribution (NDC) - 2022, National Development Plan - Chad Connection 2025 - 2030) and, subject to the approval of the Adaptation Fund Board, I undertake to implement the project/programme in accordance with the Adaptation Fund's environmental, social and gender policy, it being understood that the implementing entity will be fully responsible (legally and financially) for the implementation of this project/programme.

IMPLEMENTING ENTITY COORDINATOR

Rafael Tuts
Director
Global Solutions Division
United Nations Human Settlements Programme
Tel : +254 20 7623726 / +354 713 601 278
Email : raf.tuts@un.org

DATE : 18/06/2026

SIGNATURE :



PROJECT CONTACT PERSON

Claude Albert Meutchehe Ngomsi
Regional Portfolio Manager
Regional Office for Africa
United Nations Human Settlements Programme
Tel : +254 728 290374
Email : claudio.ngomsi@un.org



Revised PFG Submission Form¹ (additions in red)

Project Formulation Grant (PFG)

Submission Date: 24th June 2026

Adaptation Fund Project ID: To be assigned by AF Secretariat

Country/ies: Chad

Title of Project/Programme: Enhancing Climate Resilience of Displacement-Affected Communities in Eastern Chad

Type of IE (NIE/RIE/MIE): MIE (Multilateral Implementing Entity) - UN-Habitat

Implementing Entity:

Executing Entity/ies: UN-Habitat & UNHCR

A. Project Preparation Timeframe

Start date of PFG	Upon AFBS approval (indicatively Q3 2026)
Completion date of PFG	5 months after start (indicatively Q2 2027)

B. Proposed Project Preparation Activities (\$)

List of Proposed Preparation Activities	Output of the PFG Activities	US\$ Amount	Budget Note
1 Consultant – full proposal coordination	Coordinator / drafting lead for the full proposal and technical annexes	\$ 30 000,00	~50 working days + in-country missions (travel, DSA, transport)
2 In-depth feasibility study on climate-resilient bioclimatic shelter solutions in target locations: technical design tests and validation, local material and local value chain assessment, economic modelling, and business model identification for locally produced durable shelter adapted to the Sahelian context	Validated shelter typologies and replicable economic models providing the technical and financial evidence base for Component 2 implementation at scale	\$ 43 000,00	Technical consultants (shelter engineering, construction economics), field missions to eastern Chad, laboratory testing of local materials (CEB, stabilized adobe), documentation of results. Full ESSS assessment including gender analysis, conflict-sensitivity analysis, and Stakeholder Engagement Plan (SEP), in compliance with AF Environmental and Social Policy

¹ As presented in AFB/PPRC.33/40 Annex 1.

3 Environmental, social and gender safeguards assessment (ESSS)	Full ESSS compliant with AF standards	\$ 22 500,00	Documented consultations, validated priority sites, confirmed institutional arrangements, community-level data on shelter preferences, protection needs, and social acceptability
4 Gender Assessment and Gender Action Plan	Gender Assessment and Gender Action Plan drafted	\$ 10 000,00	Remote consultancy, min. 10 working days, data collection and one field mission
5 Stakeholder consultations and community engagement (Wadi Fira / Ouaddaï)	Validated community and institutional consultations	\$ 12 000,00	Stakeholder consultations and community engagement: workshops with MATUH, CNARR, Great Green Wall Agency, Ministry of Environment; community consultations in Wadi Fira and Ouaddaï
6 Government participation and travel	Attendance to field mission from Government officials	\$ 5 000,00	Domestic travel, DSA and per diem for officials (MATUH, Ministry of Environment, other) joining field missions and the validation workshop
7 Travel and participation to field missions and workshops of UN-Habitat and UNHCR staff	Attendance to field mission and workshops from relevant stakeholders working with Habitat and UNHCR	\$ 5 000,00	International and in-country travel, DSA and transport for UN-Habitat and UNHCR technical staff supporting missions and consultations
8 Project management and IE coordination	PFG managed and reported to AF	\$ 12 000,00	UN-Habitat (Implementing Entity) oversight, financial administration, and PFG progress/completion reporting to the Adaptation Fund
Project support costs (PSC – 7%)		\$ 10 500,00	Standard Fee
Total Project		\$ 150 000,00	

Please describe below each of the PFG activities and provide justifications for their need and for the amount of funding required:

Activity 1 — Full proposal coordination consultant (USD 30,000)

This activity funds a lead consultant responsible for coordinating and drafting the full project proposal and its technical annexes, ensuring that the outputs of all other PFG activities — feasibility study, ESSS, gender assessment, and stakeholder consultations — are integrated into a single coherent, AF-compliant submission. A dedicated coordinator is essential given the multi-entity arrangement (UN-Habitat as IE, UNHCR as co-EE) and the technical complexity of the shelter component. The amount covers approximately 50 working days of senior consultancy plus the costs of in-country missions (travel, DSA, and local transport) required to engage counterparts and validate findings on the ground.

Activity 2 — Feasibility study on climate-resilient bioclimatic shelter solutions (USD 43,000)

This activity constitutes the core technical and economic investigation that will turn the concept note's shelter component into an investment-ready package. Building on the FCDO-funded pilot underway in Farchana (Ouaddaï), it will test whether validated shelter typologies can be replicated across a wider range of site conditions, household profiles, and construction contexts in eastern Chad; stress-test the business model against different financing and supply-chain constraints; and produce the technical specifications, cost-per-

unit estimates, and implementation protocols required for full-scale deployment. The amount covers technical specialists (shelter engineer, construction economist, materials scientist), field missions to Wadi Fira and Ouaddaï, laboratory testing of local construction materials, and documentation of results.

Activity 3 — ESSS assessment and Stakeholder Engagement Plan (USD 22,500)

A full Environmental and Social Safeguards Standards (ESSS) assessment is required by the Adaptation Fund Environmental and Social Policy before the full proposal can be submitted. This assessment will cover: (i) environmental screening of proposed intervention sites; (ii) social risk analysis including involuntary resettlement assessment, conflict-sensitivity analysis, and gender and vulnerability assessment; (iii) development of a Stakeholder Engagement Plan (SEP) and grievance redress mechanism; and (iv) review of tenure security and land governance implications in both target provinces (Wadi Fira and Ouaddaï). The amount covers ESSS specialist fees, community-level consultation logistics, and legal review costs.

Activity 4 — Gender Assessment and Gender Action Plan (USD 10,000)

A Gender Assessment and accompanying Gender Action Plan are required under the Adaptation Fund Gender Policy and will ensure the full proposal responds to the differentiated needs and capacities of women, men, and vulnerable groups across refugee and host communities. The assessment will analyse gender roles, barriers to participation, and protection considerations relevant to shelter and settlement interventions, and will translate findings into concrete, measurable actions and indicators. The amount covers a remote consultancy of at least 10 working days, primary data collection, and one supporting field mission.

Activity 5 — Stakeholder consultations and community engagement (USD 12,000)

This activity will conduct targeted consultations with national and local authorities (MATUH, CNARR, Great Green Wall Agency, Ministry of Environment and Fisheries) and community-level engagement in priority localities, to validate site selection, confirm institutional arrangements, and gather data on shelter preferences, protection needs, and social acceptability. Consultations will use gender-responsive and conflict-sensitive methodologies ensuring meaningful participation of women, persons with disabilities, and both refugee and host community members. The amount covers workshop facilitation, consultation logistics in eastern Chad, interpretation, and documentation of outcomes.

Activity 6 — Government participation and travel (USD 5,000)

This activity enables relevant government officials to take part in the field missions and the validation workshop, securing national ownership and ensuring that institutional arrangements proposed in the full proposal are endorsed by counterparts. It covers domestic travel, DSA, and per diem for officials from MATUH, the Ministry of Environment, and other relevant bodies joining missions and the validation workshop.

Activity 7 — Travel and participation of UN-Habitat and UNHCR staff (USD 5,000)

This activity covers the participation of UN-Habitat (IE) and UNHCR (co-EE) technical staff in the field missions, consultations, and workshops required to design the project, ensuring close technical coordination between the two entities throughout formulation. The amount covers international and in-country travel, DSA, and local transport for the technical staff supporting these activities.

Activity 8 — Project management and IE coordination (USD 12,000)

This activity covers UN-Habitat's in country and HQ management of PFG activities: oversight of consultant procurement and delivery, coordination with UNHCR and national counterparts, progress reporting to the AF Secretariat, and preparation of the full project proposal integrating all PFG outputs. It ensures that feasibility study findings, ESSS documentation, MVA outputs, and stakeholder consultation results are coherently synthesized into a complete, AF-compliant full proposal.

For LLA Projects only:

If requesting additional funding for LLA projects to enable devolving decision making to the local level, please specify the activities that would directly serve to enable devolving decision making to the lowest appropriate level and enable local actors to make informed decisions on how adaptation actions are defined, prioritized, designed, and implemented:

Please provide justifications for their need and for the amount of additional funding required:

C. Implementing Entity

This request has been prepared in accordance with the Adaptation Fund Board's procedures and meets the Adaptation Fund's criteria for project identification and formulation

Implementing Entity Coordinator, IE Name	Signature	Date (Month, day, year)	Project Contact Person	Telephone	Email Address
UN-Habitat		24 th , June 2026	Camille IMBERT	33 6 24 27 93 97	Camille.imbert@un.org

Initial Consultation Report

*Programme for Enhancing Climate Resilience of Displacement-Affected Communities — Chad
(Adaptation Fund / UN-Habitat – UNHCR)*

In the course of preparing the concept note submitted to the Adaptation Fund, the programme “Enhancing Climate Resilience of Displacement-Affected Communities in Chad”, implemented by UN-Habitat as Multilateral Implementing Entity and jointly executed with UNHCR, has been the subject of a consultation process initiated from the conceptualization stage, in strict adherence to the Adaptation Fund’s Environmental and Social Policy and Gender Policy. This process engaged the national authorities responsible for territorial planning and environmental resource management, with particular attention given, in the design of activities, to the differentiated needs of women, youth, persons with disabilities and female-headed households among host and refugee populations in eastern Chad.

At this concept note stage, engagement has focused primarily on securing institutional validation of the proposed territorial approach, ensuring consistency with national planning frameworks (Chad Connection 2030, SNAT 2026-2040, PND 2025-2030) and the national Great Green Wall strategy, and confirming institutional implementation arrangements. The table below summarizes the consultations held to date, including the formal written consultation conducted with the National Designated Authority (NDA) prior to endorsement.

Consultations held to date

Stakeholder	Date	Consultation objective	Outcome
Great Green Wall Agency (AGMV) / Ministry of Environment and Fisheries	13 October 2025	Align the programme's ecosystem restoration and nature-based solutions components (reforestation, soil stabilization, agroforestry) with the national Great Green Wall strategy.	Strong institutional interest confirmed; convergence identified between the proposed restoration activities and AGMV's priority intervention zones in Wadi Fira and Ouaddaï. Agreement to explore a formal coordination mechanism at full proposal stage.
Ministry of Territorial Planning, Urban Development and Housing (MATUH)	5 May 2026	Present the integrated territorial planning approach and the proposed methodology; confirm MATUH's role as primary institutional counterpart.	Formal endorsement of the approach; MATUH confirmed as institutional counterpart for Components 1 and 3, with a commitment to co-develop implementing guidelines for Output 3.1.2.
MATUH / AGMV	12 June 2026	Final review of the concept note prior to submission; validate consistency with national policy frameworks and the environmental and social risk screening.	Concept note reviewed and endorsed by both institutions; institutional commitment confirmed; letters of endorsement being finalized ahead of submission to the Adaptation Fund Board.
National Designated Authority (NDA), Adaptation Fund Chad — written consultation	22 June 2026	Formal written review of the concept note by the NDA, raising questions and recommendations	NDA confirmed that the issues raised do not call into question the principle of

Stakeholder	Date	Consultation objective	Outcome
		across eight thematic areas, with a documented UN-Habitat/UNHCR response to each.	endorsement. UN-Habitat and UNHCR provided detailed responses and specific commitments to be reflected in the full proposal (see synthesis below).

At full proposal stage, the consultation process will be broadened to include community committees, refugee representatives and CNARR, local authorities in the target localities of Wadi Fira and Ouaddaï, and civil society organizations active in the host areas. Particular attention will be given to the balanced participation of women, youth and persons with disabilities in consultations on site selection, shelter typology design and grievance mechanisms, consistent with UN-Habitat's free, prior and informed participation principles and the Adaptation Fund Gender Policy.

Written consultation with the National Designated Authority (22 June 2026)

On 22 June 2026, the National Designated Authority (NDA) of Chad transmitted a written note raising questions and recommendations across eight areas of the concept note, to which UN-Habitat and UNHCR responded point by point. The exchange confirmed the NDA's support for the programme's intervention logic and did not call into question the principle of endorsement; it did, however, generate a set of specific commitments to be reflected in the full proposal, summarized below.

- Geographic targeting: the current endorsement covers Wadi Fira and Ouaddaï as priority provinces; final selection of specific localities will be confirmed under the Project Formulation Grant (PFG)-funded feasibility study, against objective criteria (climate hazard exposure, unplanned urban expansion, local institutional capacity, UN-Habitat/UNHCR operational presence), with formal validation by the NDA, MATUH and MEPDD prior to any final decision.
- Conflict sensitivity: the conflict-sensitivity analysis and Stakeholder Engagement Plan (SEP) will be developed under the PFG and shared with the NDA ahead of full proposal submission; tension-monitoring indicators (access to shared resources, intercommunal incidents, local perception) will be defined during preparatory consultations and operated jointly with MATUH, MEPDD and provincial authorities.
- Involuntary resettlement (ESP Principle 8): the resettlement risk assessment will be completed prior to finalizing site selection, not in parallel with construction, as part of the full Environmental and Social Screening and follow-up assessment financed under the PFG, with formal validation by MEPDD.
- FCDO pilot dependency: results of the FCDO pilot in Farchana (expected end of 2026) are treated as a priority learning input rather than an absolute prerequisite for Component 2; contingency arrangements are built into the PFG to run complementary technical testing in parallel if results are delayed, and to allow the PFG budget and Component 2 design to be adjusted if results diverge significantly from current assumptions.
- Cost-efficiency: the indicative unit cost of USD 6,270 per household will be refined through the feasibility study; the full proposal will include a detailed cost breakdown by line item and an explicit life-cycle cost-effectiveness comparison against the baseline scenario of recurrently replaced emergency shelter.
- Sustainability and exit strategy: exit arrangements will be differentiated by province — more formalized institutional handover via MATUH and municipalities in Ouaddaï, and an adaptive approach with context-review clauses in Wadi Fira — with signed maintenance and handover protocols in both provinces prior to project closure, post-project sustainability indicators integrated into the MEL framework, and a review twelve months after closure.
- Alignment with Chad's forthcoming NDC 3.0: UN-Habitat will align with the timeline set by MEPDD in coordination with the UNFCCC Secretariat, and a formal progress checkpoint

between UN-Habitat, MEPDD and the NDA will be included in the full proposal timeline to define how project evidence feeds into the urban and shelter components of the NDC 3.0.

- Implementation and partnership arrangements: UN-Habitat will remain the accredited Implementing Entity, fully accountable to the Adaptation Fund; the possibility of MATUH and/or MEPDD acting as Executing Entities will be examined during the PFG-funded national capacity assessment; in the interim, the full project document will establish a joint steering committee with balanced representation (NDA, MATUH, MEPDD, provincial authorities, UN-Habitat, UNHCR), a formal partnership agreement setting out roles and responsibilities, and a national capacity-building plan designed with a view to future accreditation of a National Implementing Entity (NIE).

Initial Gender Assessment

*Programme for Enhancing Climate Resilience of Displacement-Affected Communities — Chad
(Adaptation Fund / UN-Habitat – UNHCR)*

Gender context

In host areas of eastern Chad, women and children account for approximately 86% of new arrivals of Sudanese refugees, and nearly a quarter of refugee households (25%) are female-headed, reflecting displacement patterns marked by acute socio-economic vulnerability. Access to land, a primary productive resource, remains limited: only 50% of households have access to it, and over 74% of economically active women work in unprotected, rain-fed agriculture that is highly exposed to climate hazards. Chad ranks 190th out of 193 countries on the UNDP Human Development Index, reflecting particularly constrained institutional capacity and social protection systems for women and vulnerable groups. Humanitarian assessments further highlight concerning levels of gender-based violence risk, compounded by inadequate lighting, the absence of segregated facilities, and non-functional referral pathways in host sites.

Gender-differentiated climate vulnerabilities

Women and girls bear a disproportionate share of climate change impacts: they spend up to 6 to 8 hours a day collecting water as water points recede further under the effect of prolonged droughts, and they carry primary responsibility for household food security despite constrained access to land, credit and extension services. During flash flooding events, women, unaccompanied children, the elderly and persons with disabilities are also those most often stranded, owing to limited mobility and fewer assets to fall back on. These gender-differentiated climate vulnerabilities compound pre-existing protection risks, particularly gender-based violence, in a context where women remain structurally underrepresented in local decision-making bodies on territorial planning and resource management.

Programme measures and transformative outlook

The programme integrates gender equality, protection and anti-exclusion safeguards across all community engagement and institutional capacity-building activities, in line with the Adaptation Fund Gender Policy and UN-Habitat's "leave no one behind" principle. Beneficiary selection will follow a participatory approach involving CNARR, UNHCR and community authorities, with an indicative targeting of 60% host community and 40% refugee beneficiaries, applied transparently to help prevent intercommunal tensions. The participatory design process for shelter typologies will actively involve women and persons with disabilities in the selection of technical solutions. Accessible, gender-sensitive grievance mechanisms will be established to enable women to safely raise concerns, including on safety and working conditions. Monitoring will rely on data disaggregated by sex and by status (refugee/host), collected throughout implementation to track equitable access to programme benefits, in particular the green employment opportunities generated by local material production and the resilient construction value chain.