



ADAPTATION FUND

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

PROPOSAL FOR LIBYA



ADAPTATION FUND

ADAPTATION FUND BOARD SECRETARIAT
TECHNICAL REVIEW OF PROJECT PROPOSAL FOR
"STRENGTHEN CLIMATE CHANGE ADAPTATION AND HEALTH SYSTEM PREPAREDNESS,
READINESS AND RESILIENCE TO MULTI-HAZARD RISKS AND CLIMATE IMPACTS "

Project Title	Strengthen climate change adaptation and Health system preparedness, readiness and resilience to multi-hazard risks and climate impacts
Project ID	AF00000519
Category	Regular size project (over \$1 million)
Type	Single country project
Stage	Concept
Country	Libya
Implementing Entity	WHO
Financing Requested	USD 5,000,000.00
Reviewer	Ahmad Ghosn

Co-reviewer(s)

IE Contact Person

Antonios Kolimenakis, Cosima ZINGARIELLO, Elena Villalobos-Prats, Nicole Sarkis

Secretariat's Overall Comment

The project "Strengthen climate change adaptation and Health system preparedness, readiness and resilience to multi-hazard risks and climate impacts" aims to strengthen a climate-resilient health system capable of preparing for, responding to and reducing the impacts of climate-related multi-hazard threats. The proposal includes a request for a project formulation grant of USD 150,000. The initial technical review raised several issues, such as but not limited to, the relevance of some statistics in the Background and Context, the number and consistency of the Components, scope and scale of the deliverables, Theory of Change, Quantification of benefits, National and sub-national strategies and plans, Technical Standards, duplication of other projects, Alignment with the AF results framework, sustainability and Environmental and Social impacts, as is discussed in the number of Clarification Requests (CRs) and Corrective Action Requests (CARs) raised in the review. The second technical review finds that several of the CRs and CARs raised in the first review are addressed. However, several others need to be addressed including: revising the components financing tables and providing more details on the components activities; quantifying the project benefits, revising the relevant national plans/ strategies, applicable national standards, and related projects lists/ discussions; providing more details on the consultations; revising the AF E&S check list; revising the AF RF alignment table; among others as raised in the review. The third technical review finds that most of the CRs and CARs raised in the second review are adequately addressed. However, several still warrant additional clarifications including: revising objectives and components financing table; providing more details on the project outputs/ activities; quantifying the benefits as possible at this stage; providing summary tables for relevant national plans/ strategies and for applicable national standards; providing a summary table of the related completed and ongoing projects; Inclusion of please a summary table of the consultations; revising the AF RF alignment table as per the AF requirements updated in July 2026; revising the sustainability section discussions; among other CRs, CARs and notes indicated in the review.

Country Eligibility

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

Response: Yes

Secretariat: Yes (First Technical Review, March 3, 2026)

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

Response: Yes

Secretariat: Yes Libya is a developing country highly vulnerable to the adverse effects of climate change due to its arid climate, chronic water scarcity, and fragile institutional context. The country faces increasing temperatures, more frequent and intense heatwaves, flooding events, droughts, and sand and dust storms. These climate hazards directly and indirectly affect public health, including heat-related illness, water- and vector-borne diseases, and disruption of health service delivery. Vulnerability is further compounded by damaged infrastructure and limited adaptive capacity within the health system. (First Technical Review, March 3, 2026)

Project Eligibility

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

Response: Yes

Secretariat: Yes As per the Endorsement letter dated 8 February 2026 (First Technical Review, March 3, 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: No. Editorial/formatting comments: i. Kindly include a Table of Contents with page numbers (and annex list) to support navigation and traceability of key sections and attachments. ii. Kindly revise the document to ensure that all key factual assertions —particularly in the Context/Background section— are supported by footnoted citations. Please also ensure the footnotes are used consistently throughout the document. iii. Kindly revise the Context/Background evidence to ensure that key statistics and examples are clearly relevant to Libya and explicitly linked to the project's vulnerability pathways and design choices. Where global/cross-country figures are used (e.g., FCS poverty trends; GBV/child marriage examples), please either (i) briefly explain the implication for Libya and how it informs the proposed interventions, or (ii) remove/replace them with Libya-relevant evidence. For the Minimum Expenditure Basket (MEB) statement, please provide a more meaningful comparison (e.g., year-on-year or multi-year trend) and explain its relevance for vulnerability and access to services under climate shocks. iv. For key monetary figures presented in LYD (including the MEB), please include an approximate USD equivalent in parentheses. CR1: Please revise and resubmit the Concept Note to ensure full compliance with the 50-page maximum limit, including annexes, while maintaining required content. CR2: Please note that the Terminal Evaluation should be completed within 9 months of the Project Closing date. Thus the date in the Project Calendar (page 17) should be changed to a date within that time period. (First Technical Review, March 3, 2026)

Response: Not Cleared

Secretariat: Editorial/formatting comments not Cleared i. Not cleared. Table content is included however numbers in table do not match with content. ii. Not cleared. Footnotes citations were added, however there is

still some factual assertions without them. Example: .First paragraph pg. 3: "This is the source of the Great Man-Made River: the world's largest irrigation project ever built", and 4th paragraph pg 4. Please include references to factual statements. iii. Cleared. Global figures were removed. New Libya statistics were added that are better linked to the proposal. iv. Not cleared. See last paragraph, pg. 3. There are still monetary figures in LYD without a USD equivalent. CR1: Not Cleared The concept note is 53-page long, plus a 4 page Annex. Proposal should be a maximum of 50 pages long, including annexes.. Please note that page 14 in the proposal has no text. CR2: Cleared. Date was corrected. Terminal evaluation is 9 month after of project closing. See Project Calendar in page 23. CR1 (NEW): Please add number and label to all tables and figures in the proposal. CR2 (NEW): Please use paragraph numbers in the proposal document. CAR1 (NEW) : Please clarify if Ministry of Local is the complete name for the government agency. If not please amend.

Response: Not Cleared

Secretariat: Editorial notes: Not fully cleared. 1. In addition to the table of contents, please add list of abbreviations, tables and figures (will not count towards AF document length limit. 2. Provide Tables and figure numbers and headings across the document. 3. Ensure that all abbreviations are spelled out when first used and refer to tables, figures and annexes at related discussions. 4. Ensure that all tables and figures are numbered and with appropriate headings. 5. Under "Violence against Women and Children (VaW), inequalities, poverty and vulnerability", p.4, check the statement "Libyan women in the labor force of 25.7% compared to 79% for men", the percentages add up to more than 100%. 6. Revise section numbering typos for Part IIA on p. 40. 7. Conduct a round of editing/ proofreading for the document after addressing the review comments and ensure that its length stays within the AF limits. 8. For the next review, please ensure that the revised document (TC version) shows the TC against the clean version and date both versions. CR1: Not cleared. The document is now 52 pages (Table of contents will not be counted towards document length) excluding the Endorsement letter what should be included in Part IVA, and possible further information to be added to address review comments. Please revise the document and ensure its length is maintained within the AF limits. CR2 (NEW): Cleared. Optional/ not obligatory for clearance. CAR1 (NEW): Cleared. See p.1. CAR1A (New): Please address the following: 1. On p.1, please only list UNDP as the executing entity ("Implementation Arrangements", on pp. 27-28 indicates that UNDP is the EE). If is not the case, please indicate in Part IIA, the EE for each component. 2. Consider Changing the "Goal" to "Objective or Overall objective" and change "Objectives" that follow to "Specific Objectives". 3. In the components and financing table, only keep the output statement. Move other information/ text to Part IIA components/ outputs/ activities discussion as appropriate). Also, Add table number and heading. Apply the same to all tables in the document. 4. Provide figure number and heading for the theory of change. Apply the same to all figures across the document. 5. Provide table number and heading for the Project Calendar. Apply for all tables in the document. (16 August 2026)

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: Not Cleared

Secretariat: Yes, however additional information is required. The climate section (pp 5 – 6) currently mixes observed climate, future projections, and climate impacts, which makes it harder to assess the magnitude/uncertainty of key climate drivers and how they inform the selected adaptation approach. In addition, climate variables are sometimes referenced imprecisely (e.g., "temperature" without specifying whether it refers to mean, maximum, or minimum temperature; baseline period; horizon; scenario). A clearer structure would strengthen the CN. CR3: Kindly reorganize the climate section using clear sub-headings for: (i) observed climate trends, (ii) projected future climate (including horizon and scenario where available), and (iii) climate impacts/risk pathways relevant to health outcomes. Please also define climate variables precisely (e.g.,

mean vs maximum temperature; precipitation/extreme rainfall; heatwave metrics) and indicate the reference period and uncertainty where cited. While the CN provides a strong narrative on climate hazards and states that climate change “fundamentally modifies” the baseline, the current description is not consistently specific on what currently exists and what climate-attributable gaps exist in the main areas of intervention (e.g., surveillance/EWS functionality and interoperability; emergency preparedness structures and SOPs; baseline facility resilience to heat/flooding and service disruption). CR4: Kindly clarify in the Background/Context and/or component descriptions with respect to the following: (i) what currently exists (baseline systems/capacities) for surveillance/EWS, emergency preparedness, and facility resilience; (ii) what climate-related limitations/gaps are currently observed; and (iii) how the proposed activities will address those climate-attributable gaps. There are instances where statements do not align with the paragraph’s focus (e.g., marine impacts such as saltwater intrusion, seagrass loss and marine heatwaves introduced within a mental health discussion). In addition, the narratives in pages 10 to 12 would be better placed in the section on project implementation arrangements rather than contextual background. At CN stage, the context section should primarily focus on the health sector related issues (governance, actors, institutional constraints) and the climate/health vulnerability rationale, while project implementation details can be reserved for the project description and expanded at Full Proposal stage. CR5: Kindly review the Context/Background section to ensure thematic coherence (removing or relocating statements that do not relate to the paragraph’s topic) and to avoid including detailed project implementation arrangements in the context section. Please retain in Context/Background only the essential country/system governance context (health sector ecosystem, institutional challenges, key actors) and move project implementation details to the project description section (to be further elaborated at Full Proposal stage). There are also inconsistencies throughout the proposal in the number of components as well as the priorities assigned to the respective components. For example, the section on “Project Components and Financing” (pp 13 – 17) describes 5 Project Components along with their respective outputs and outcomes. However, the last sentence in the section titled “Linking climate projections to the adaptation intervention mix:” (page 20) states that the project is “structured around four mutually reinforcing components.” In addition, in Part II (Justification for funding requested) in the subsection titled: “Key elements of the full cost of adaptation reasoning include:” (pages 41 – 42) maps the priorities identified in the consultation feedback to four components. Moreover, the components do not coincide with those in the Project Components table. (e.g., “Component 3 in the stakeholder feedback is associated with integrated climate-informed surveillance and EWS which is Component 4 in the Components table and Component 2 prioritizes WASH and solarization which is Component 3 in the Project Components Table. CR6: Kindly confirm the final number of components and revise the concept note to harmonize component numbering/titles consistently across all sections (objectives, Components & Financing table, benefits narrative, consultation-feedback mapping, and results alignment). Please ensure that each activity/output is traceable to the correct component and that the ToC narrative reflects the same finalized structure. There is also some inconsistency in the number of direct beneficiary (1,070,500 vs 1,071,500) based on the stated catchment methodology. CR7: Please correct and harmonize the direct beneficiary figure across the document. If the stated methodology is maintained ($80 \text{ PHC} \times 10,000 + 6 \text{ hospitals} \times 45,000 + 1,500 \text{ trainees}$), the consistent total is 1,071,500. The description of the interventions and infrastructure proposed by the project does not provide sufficient details to adequately assess whether the requested budget is justified. For example: The CN allocates the sum of USD 120,000 for “Output 2.1.1 – National Health Adaptation Plan developed.” Given that sectoral adaptation planning typically requires multi-stakeholder consultation, technical analysis, drafting, validation, and institutionalization steps, the CN should clarify what “NHAP” entails (e.g., a full sector plan vs a more limited strategy/toolkit), its expected deliverables, and the consultation/validation process to ensure it is a robust adaptation product (and not a nominal document). The CN indicates that site/facility prioritization and community participation mechanisms will be developed further at Full Proposal stage (p 39). Given that site selection largely determines who benefits (especially vulnerable groups) and how well activities address climate risks, the CN should already provide a preliminary prioritization logic grounded in climate hazard exposure, vulnerability, and service criticality. CR8: Kindly provide a concise, CN-level set of preliminary prioritization criteria (e.g., climate hazard exposure, vulnerability, service criticality, accessibility for vulnerable

groups), and please explain how stakeholder/community inputs—including women, youth, persons with disabilities, IDPs and migrants—will be incorporated to validate and refine these criteria during Full Proposal development. The concept note discusses multiple system and facility-level constraints throughout the narrative, but the barriers the project intends to address are not synthesized in one place. A short, structured list of key barriers at the end of the context section (immediately before “Project Objectives”) would strengthen traceability (problem → barriers → activities/components) and improve the reviewer’s ability to assess alignment and adaptation additionality. This would also support the description of the Theory of Change. CR9: Kindly include, immediately before the “Project Objectives” section, a concise list of the main barriers/gaps the project aims to address (e.g., surveillance/EWS gaps, preparedness and response capacity gaps, continuity of energy and WASH in facilities, coordination/One Health gaps, access barriers for vulnerable groups), and briefly indicate how these map to the project components. Given the current inconsistencies in component structure and narrative references, a simple visual Theory of Change would materially improve clarity and traceability at concept stage. A ToC diagram would help confirm the results chain and ensure alignment between the climate risk rationale, the selected adaptation measures, the intended outcomes, and the five-component structure. CR10: Kindly include a concise Theory of Change diagram (CN-level) that visually links (i) key climate hazards and vulnerability drivers; (ii) the project’s objective(s) and five components/outputs; (iii) the expected short- and medium-term outcomes on health system resilience/adaptive capacity and (iv) risks and assumptions. Please ensure the diagram is consistent with the final component structure. (First Technical Review, March 3, 2026)

Response: Not Cleared

Secretariat: CR3 (NEW): Part II, A (pg 23- 24). The logic of this section is hard to follow; the many sections do not seem to connect to each other. This section should describe the component with a focus on concrete adaptation activities and how they contribute to climate resilience. Please reorganize this section to improve the clarity of the information presented. CR3: Not Cleared Some corrections are needed. The climate section was re-organized based on the recommendations (i), (ii) and (iii), however the reference cited are incomplete, e.g. reference 18, 19 and 20 (pg 7). Please include complete reference, and hyperlink or DOI when available CR4: Cleared The background/context was clarified based on recommendations (i), (ii), and (iii) in pg. 7- 10. CR5: Not Cleared The Context/Background section is well organized around proposal objectives from general climate impact relevant to health, to the health sector structure and capacity addressing what is in place, limitations/gaps, barriers that the project aims to address, see pages 7-9. However section (iv) How the proposed activities will address the stated gaps/barriers (pg. 10), needs to move details to the project description section CR6: Not cleared. There are now 5 component throughout the proposal. However: i. Ensure that table in page 15-20, separate cost per output from total cost per component, e.g., the two values for output,. 5.1.1 and 5.2.1 are very confusing ii. Cost per component is not yet consistent throughout the proposal. Please make corrections. a. Not all costs in section C, page 31, match values in table 15-20. b. Cost in section I, pg 38, component 5 does not match values in table pg 15-20 iii. Page 31, section C, second paragraph. Please include the component number or component name as used in table in page 15-20, e.g., after “evidence and planning” could add (component 1 US\$440,000) iv. ToC does not reflect all outputs and activities. Please make correction CR7: Cleared The correction was made. CR8: Not Cleared. Priorities stated in section H, page 35. How stakeholders’ input will be included at full proposal stage explained in section “Outstanding gaps and next steps” in page 36: Conducting structural consultation. However for this stage please insure the following: 1. please provide in tabular format the consultation information, dates consulted, groups/individuals consulted, topics discussed, how integrated in current proposal. 2. Please also clarify how vulnerable groups including women, indigenous people, elderly etc. where consulted, their representation to date and how that will continue for full proposal development. CR9: Not Cleared There is a list of barriers/gaps (pg 8-9) that project aims to address (Surveillance/EWS, Emergency preparedness and facility resilience) but they are not linked to specific project components. Please map the barrier/gaps to project components. CR10: Not cleared Please see CR6 (iv). The ToR is not complete: Please include: - key climate hazards and vulnerability drivers; - Objective: what the project would like to achieve - Outcomes are incomplete The ToR is not consistent with the 5-components proposal

please address. CR4 (NEW): Component number of the proposal do not match with information provided in the AP portal: e.g. component 5 in the portal is component 1 in the proposal. CAR2 (NEW): Please include an image of ToR with better resolution; the one in the proposal is hard to read. CR4 (NEW): 1. At Part I, output 1.1.2 please clarify if how this any aspect of this adaptation planning tool being developed will be complement any concrete action in this current proposal. 2. At Part 1 please note that AF does not fund NAP developments but would fund the concrete adaptation actions emanating from such plans. Therefore output 2.1.1 would have to be deleted. 3. On Component 4.1 - please clarify the sustainability mechanism for the surveillance activities proposed to ensure continuity of this intervention post project implementation. (sustainability). 4. It would be useful if aspects of Component 5 can be pulled into a knowledge and learning component. 5. Please clarify why at least 1,740,507 (not counting some other elements in under component 4), is targeting capacity building, training, and development of policies, plans and strategies. The AF resources should be primarily geared towards concrete adaptation actions yet for this proposal this is not the case. Please reframe the proposal to prioritize more concrete adaptation actions. CAR3 (NEW): At Part II B, please indicate the strategic outcome areas of the fund that the proposal is responsive to.

Response: Not Cleared

Secretariat: CR1A (New): In part IIA, please address the following: 1. List the activities under each output along with related details/ targets. The details moved from the components financing table (see CAR1 (New) can be utilized for the purpose, among details available at this stage. Apply for all components outputs. 2. Delete the "Implementation arrangements", pp. 27-28, as they are not required at this stage (this will save space for other information requested by the review). All what is needed at CN stage is to specify the IE and the EE/s on p.1. CR3 (NEW): Cleared. See Part IIA, pp. 22-29. CR3: Cleared. See pp. 8-10. CR5: Cleared. See pp. 10-12. CR6: Cleared. See components and financing table, pp. 14-18, Part IIA, pp. 22-28, and pp. 20-21 (ToC). CR8: Cleared. See Part IIA, pp.34-35. CR9: Cleared. See pp. 9-10. CR10: Cleared. See ToC, pp. 20-21. CAR2 (NEW: Cleared. See p. 20. CR4 (NEW): Cleared. See pp. 25-28 of Part IIA. CAR3 (NEW): Not fully cleared. Please move the below paragraph from Part IIA (p. 49) to Part I (after the "objectives") or as appropriate to the beginning of Part IIA: "Each component is mapped to specific AF Outcomes (1, 2, 3, 4, 6 and 7), with corresponding Fund indicators. Component 1 contributes primarily to Outcome 7 (improved policies and regulations). Component 2 maps to Outcome 4 (increased adaptive capacity in health infrastructure). Component 3 aligns with Outcomes 3 and 6 (climate-risk monitoring and early-warning). Component 4 contributes to Outcomes 2 and 1 by strengthening the adaptive capacity of institutions and vulnerable populations". (16 August 2026)

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: Not Cleared

Secretariat: Yes, however, additional information is required. Part II B (pp 31 – 34) articulates a broad set of expected economic, social and environmental benefits and commits to ESP/Gender Policy compliance (screening, ESIA/ESMP, consultations, gender analysis and GAP). However, the benefits narrative is largely qualitative, and several statements require clarification to ensure consistency with the project design and to demonstrate equitable, direct benefits for vulnerable groups across components. While vulnerable groups are listed (e.g., women and girls, persons with disabilities, IDPs, migrants, children, elderly), the proposal does not specify the particular benefits each group will receive in the target areas, nor how equitable distribution will be operationalized. CR12: Please add a short "beneficiaries → concrete benefits" block that links each priority group to specific project features (e.g., accessible WASH upgrades, inclusive early-warning communication formats, CBS participation pathways, ORI microplans prioritizing displaced populations, referral continuity measures). The

economic, social and environmental benefits are largely qualitative. Quantified estimates already mentioned in the components would strengthen the impact narrative and improve alignment with the Fund's results-based approach. CR13: Where possible, please quantify expected benefits using already stated project parameters (e.g., direct beneficiaries, number of facilities upgraded, number of professionals trained) and briefly indicate that additional benefit quantification (including proxy indicators and any estimates) will be developed and substantiated at Full Proposal stage. The proposal commits to a gender analysis and Gender Action Plan, but the gender benefit statements remain generic and include at least one imprecise claim (e.g., WASH in healthcare settings reducing women's burden of water collection). CR14: Please (i) include a summary on initial gender considerations/assumptions relevant to the Libyan context (differential risks, barriers to access, protection risks under climate shocks), and (ii) refine WASH-related gender benefits to reflect realistic pathways (privacy, safety, menstrual hygiene management where applicable, accessibility, reduced exposure to protection risks when accessing services). The social benefits section states that the project will build the capacity of "health professionals and communities" and enable communities to "take ownership" of health and adaptation strategies. Based on the outputs described, community capacity-building is currently most explicit through Community-Based Surveillance (Component 4) and dissemination/risk communication elements, rather than a broader community empowerment package. CR15: Please either (a) adjust the wording to reflect the current scope (community participation primarily through CBS, risk communication and inclusive alert dissemination) and justify the short scope, or (b) explicitly add/describe additional community-level activities that enable direct and equitable engagement beyond beneficiary status—such as community preparedness planning linked to the All-Hazards PPR Plan, community committees/networks for climate-health preparedness, co-design of risk communication messages and triggers, and participatory monitoring roles for women, youth and vulnerable groups across Components 3–5. (First Technical Review, March 3, 2026)

Response: Not Cleared

Secretariat: CR12: Not Cleared Proposal states the economic, social and environmental benefits (pg 30), however it still does not specify specific benefits for vulnerable groups, or how distribution will be made equitable in this section. A section on vulnerable groups benefits was added in page 24 (Section II, A) however the "how" it is not clear. Please elaborate. CR13: Not Cleared There is no quantification of expected benefits in section II B please include with the re-submission. CR14: Not Cleared (i) Please provide a summary of initial gender considerations/assumptions (ii) Please make clearer WASH-related gender benefit CR15: Not Cleared The social benefit section could link to components and/or give more explicit example as recommended

Response: Not Cleared

Secretariat: CR12: Cleared. Sufficient for CN stage. See pp. 29-30. CR13: Not cleared. Support the benefits discussed under the different aspects with related quantification where possible (activities targets can be useful in this respect, number of beneficiaries established, etc.) among other additional information as/ if available. CAR 14: Cleared. Sufficient for CN stage. See "Violence against Women and Children (VaW), inequalities, poverty and vulnerability", pp. 4-5, and IE response for the first review. CR15: Will be cleared upon clearing CR13 above. (16 August 2026)

Is the project / programme cost effective?

Response: Cleared

Secretariat: Yes, however, additional information is required. Part IIIC (page 34) provides a general value-for-money narrative (leveraging existing structures, prevention, One Health coordination and synergies). However, the cost-effectiveness rationale remains largely generic and includes statements that are not clearly reflected in

the proposed component outputs. In addition, the breadth of the proposed package (policy/planning, systems strengthening, surveillance/EWS, facility upgrades including solar and WASH, workforce capacity-building) requires a clearer explanation of scope prioritization and sustainability logic to demonstrate cost-effectiveness within the USD 5 million envelope, particularly in the context FCV (Fragility, Conflict and Violence). CR16: Please clarify how the scope of activities has been prioritized to ensure feasibility, depth of impact, and cost-effectiveness within the requested budget, particularly given the FCV operating context. Please strengthen the value-for-money narrative by referencing the project's key measurable outputs already presented (e.g., number of facilities supported, number of personnel trained, surveillance/EWS functions strengthened). (First Technical Review, March 3, 2026)

Response: Cleared

Secretariat: CR16: Not Cleared Scope of activities is clarified, and examples of specific output are mentioned (Section IIIC, pg 31-32). However, please strengthen the linkage emphasizing prevention (component 2 and 3) as a cost effective measure. Although this information is included in the proposal it need to better developed. Additionally, second paragraph in section C (pg 31) might not be needed.

Response: Cleared

Secretariat: CR16: Cleared. Sufficient for CN stage. See Part IIC, p. 30. A comprehensive cost-effectiveness analysis against other alternatives must be provided at full proposal stage. (16 August 2026)

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: Not Cleared

Secretariat: Yes, partially. Part II D (pp 35 and 36) demonstrates strong alignment with Libya's climate-health priorities as articulated in the (updated/draft) NDC and the One Health policy direction. It also refers to relevant sectoral and cross-sectoral instruments (e.g., One Health MoU, health system strengthening priorities, food security/food safety strategy, SDGs). However, several references require stronger substantiation (document titles/status), and some acronyms/targets should be supported with explicit citations to the relevant national instruments. The CN refers to Libya's "first NDC (2025)" and to NAP priorities/implementation. CR17: Kindly consider including the details of all the identified plans and strategies in table format, including: (i) The Specific name of the plan/strategy and years of implementation, title and issuing institution (ii) Main Objective(s) (iii) Status (i.e. draft/updated or under preparation) (iii) Explain the relevance to the proposed project, including its alignment with the existing plan or strategy. (First Technical Review, March 3, 2026)

Response: Not Cleared

Secretariat: CR17: Not cleared Please organize information in Part II section D (page 32) in a table format, a list of which policies and strategies that the project is aligned to in 1 column, demonstrate the alignment in another column, the name of the policy/strategy in another column, also include citation, and acronyms clarification.

Response: Not Cleared

Secretariat: CR17: Not fully cleared. In addition to Libya's NDC (2025), please revise the discussion in Part IID to include other plans mentioned in the discussions and in Annex 1 (e.g.: e.g.: NAP, One Health MoU, National Water Security Strategy, National Biodiversity Strategy and Action Plan (2023–2030), etc.) in a summary table. The Table should include the plan/ strategy/ etc. title and date, main objective, and relevance to the project. (16

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

Response: Not Cleared

Secretariat: No. Part II E (pp 36 – 37) states an intention to comply with national technical standards and to default to international best practice where national standards are absent or inconsistently applied. However, it does not identify the relevant national technical standards (e.g., building codes, water quality regulations, electrical/solar installation standards, healthcare waste and wastewater requirements) nor does it explain how compliance will be ensured and verified in practice, as required under the Fund’s ESP. CR18: Please identify the relevant national authorities/competent entities and the applicable technical frameworks (where available) that will govern: (i) building/works approvals and construction requirements for healthcare facilities, (ii) electrical safety and solar installation requirements, (iii) WASH and water quality requirements for healthcare settings, and (iv) healthcare waste and wastewater management requirements. Where formal standards are not available or not consistently applied, please indicate the interim approach and the international reference standards that will be adopted. (First Technical Review, March 3, 2026)

Response: Not Cleared

Secretariat: CR18: Not cleared Proposal has new paragraph for section II, E (pg. 33-34) that provides information on relevant standards, but it does not identify and cite specific ones. There is no explanation on how compliance with be ensured. At part II E, please present in a tabular format a list of which national technical standards that the project is aligned to in 1 column, demonstrate the alignment in another column, the name of the technical standard in another column, the responsible agency in another column.

Response: Not Cleared

Secretariat: CR18: Not cleared. Please revise Part IIE to include a summary table of applicable standards. The table should include the national technical standards (with dates), the project interventions/ activities they apply to, and the arrangements to ensure related compliance. Applicable standards may include building codes, water quality regulations, environmental requirements, and any other sector-specific regulations relevant to the project interventions. (16 August 2026)

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

Response: Not Cleared

Secretariat: No. See Part II F (;age 37) The CN does not identify the main potentially overlapping projects/programmes in Libya that relate to the proposed interventions (e.g., health facility solarization/WASH rehabilitation, One Health initiatives, early warning systems, and surveillance strengthening), nor does it clearly explain where overlap may exist and how complementarity and learning from prior initiatives will be ensured. The proposal currently refers to WHO’s country support and a general “One Health initiative,” but does not list other key programmes/donors operating in related areas in Libya. CR19: Please identify, to the extent possible, the main relevant initiatives and funding sources that could overlap with project activities—particularly those related to: (i) solar energy for health facilities (e.g., UNICEF-supported solarization of PHC facilities), (ii) One Health initiatives supported by other donors (e.g., EU/AICS-supported One Health launch), and (iii) early warning/hazard systems and related platforms (e.g., UNICEF-supported “Libya Mozn” real-time early warning

system). The CN does not demonstrate a logical assessment of where overlap may occur (if any) and how this project will avoid duplication while building synergies (e.g., distinct geographic targeting, complementary system functions, or integration of health EWS with existing hazard EWS). CR20: Please prepare a comprehensive list of all relevant project providing information on their budget, the donor, years of implementation and objectives and identifying areas of synergy/complementarity, lessons learned (including mistakes) and non-duplication. (First Technical Review, March 3, 2026)

Response: Not Cleared

Secretariat: CR19: Not cleared The proposal adds initiatives but connection to the proposal is not clear. Please rewrite this section and organize by initiatives. CR20: Not cleared At part II F, please present the information in a tabular format clearly indicating in respective columns, name of project, funding agency of project, synergy/duplication if any, mitigation action if needed. Similar to CR19, please re-write, and include information requested. Ensure that it makes clear: overlap if any, duplication avoidance, and synergies

Response: Not Cleared

Secretariat: CR19: Cleared. See Part IIF, pp. 32-33. CR20: Not cleared. Please revise Part IIF to include a summary table of the related completed and ongoing projects. The table should include project title and funding source, date (start-end) and status (ongoing, completed, etc.); project objectives focus and location; synergy/ lessons learned/ complementarities with the proposed project. (16 August 2026)

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

Response: Not Cleared

Secretariat: No. Part II G (pp 37 – 38) of the CN describes a set of learning and knowledge management (KM) activities (learning reviews/workshops, documentation of case studies, policy briefs/technical reports, and participation in national/international forums). However, these KM activities are not clearly anchored in the project's outputs, budget and implementation arrangements, and the "feedback loop" for applying lessons learned to improve delivery is not sufficiently specified. The KM activities are described narratively but are not clearly reflected as costed outputs (beyond limited dissemination elements already included under Component 1). CR21: Please clarify where KM is delivered within the existing component structure (e.g., primarily through Component 1 dissemination outputs and as a cross-cutting function). The proposal does not explain how learning will be systematically tracked, analyzed periodically, and fed back into implementation decisions to improve effectiveness and scalability. CR22: Please briefly describe the learning cycle (what evidence will be tracked, frequency of learning reviews, and how lessons will be translated into concrete adjustments—e.g., updates to SOPs/simulation exercises, training curricula, facility readiness standards, and coordination protocols). In the Full Proposal stage, it is expected that the intended institutional location for knowledge management products (e.g., Ministry of Health/NCDC/One Health platform), the intended repository/access mechanism, and how lessons learned will be disseminated to national and subnational stakeholders (including inclusion considerations where appropriate) will be indicated. (First Technical Review, March 3, 2026)

Response: Not Cleared

Secretariat: CR21: Not cleared Section II, G (pg 35) describes KM but i. It is not linked to any project component. ii. It does not show how learning will be tracked, and/or analyzed. Proposal mentions what it will do, not how. At part II G, please build on the various learning and knowledge aspects of the proposal indicated in the proposal. It would also be best to pull some of these into a knowledge component. CR22 Not cleared Please be more

specific. For example, instead of saying “regular learning reviews”, could say every-six month, instead of “key finding will be translated into policy reports...”, could say update facility readiness standards, etc

Response: Not Cleared

Secretariat: CR21: Not fully cleared. Please briefly reflect “component 5” activities in Part IIG. CR22: Cleared. See Part IIG, See pp. 33-34. More details on Learning and Knowledge management aspects should be provided at full proposal stage. (16 August 2026)

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: Not Cleared

Secretariat: Yes, however, additional information is required. Part II H (pp 38 – 40) describes the initial consultation workshop held in August 2025 and lists categories of participants (government ministries, UN agencies, research institutions, local government, healthcare providers), and it also refers to targeted engagement with CSOs working on gender equality, disability inclusion, youth/women empowerment, and climate advocacy. However, the description does not provide basic verifiable information required to assess inclusivity and gender considerations—such as the total number of participants, % women/men, whether vulnerable groups were present directly or only represented indirectly through CSOs, the names of the CSOs/organizations consulted, and the timeframe for the non-workshop consultations. CR23: Kindly provide additional detail on the consultative process, including: (i) the total number of people consulted and the % women/men (and, where available, age/disability status); (ii) the names of the organizations consulted (including CSOs) and how they were selected; and (iii) the timeframe (dates/months) for interviews/engagements beyond the August 2025 workshop. Please also clarify whether vulnerable groups were consulted directly at this stage or only indirectly through CSOs, and how gender considerations were operationalized in the consultation process. The narrative does not clearly confirm direct consultation with target-area groups, nor does it describe how specific concerns (e.g., barriers to access during floods/heatwaves, GBV risks during displacement) were translated into concrete design choices, criteria, or safeguards at this stage. CR24: Kindly clarify whether marginalized and vulnerable groups in the intended target areas (e.g., IDPs, migrants, persons with disabilities, women and youth) were consulted directly in the initial consultations at concept stage, and if not, please explain how their interests and concerns are being captured and reflected in the current concept design. Please describe which specific consultation inputs influenced which elements of the concept (e.g., component focus, inclusion measures, risk management measures). Please also confirm whether any indigenous peoples have been identified in the target areas and, if applicable, how they were engaged at this stage. The CN explicitly states that “community participation mechanisms” and “prioritization of specific facilities” will be addressed during full proposal preparation (p 39). Given that major investment decisions (e.g., which facilities/sites will be upgraded) strongly determine who benefits, deferring prioritization without outlining at least initial criteria and an approach to incorporate community input creates a risk that participation becomes procedural rather than influential. CR25: Kindly explain how community and vulnerable-group inputs will be integrated into site/facility prioritization and design decisions during full proposal development. Please provide an initial set of prioritization criteria and a short description of the process to validate these criteria with affected communities (including separate sessions for women, youth, PWD, migrants and IDPs, as referenced). As site prioritization will be finalized at Full Proposal stage, the consultation narrative would benefit from clarity on whether any indigenous peoples and/or distinct ethnic minority communities may be present in the preliminary target areas, and how this will be verified and addressed through stakeholder engagement. (First Technical Review, March 3, 2026)

Response: Not Cleared

Secretariat: CR23: Not Cleared Proposal clarifies that vulnerable groups were consulted indirectly through CSO however, Part II H (pg. 35-36) still does not include the information requested in (i), and (iii). For (ii), it provides the name of the organizations but not how they were selected. Please address. Note 1: Please define acronym CSO and all others in the proposal when they are first used. CR24: Not Cleared. Proposal clarifies that vulnerable groups were consulted through CSOs and how their feedback informed project design. 1. In order to strengthen the project proposal please, link feedback to specific project component/output. 2. Please provide clarification information on Indigenous Peoples. CR25: Not cleared. Proposal provides general criteria to determine facility selection (Section H, second paragraph, pg. 36) and a process on how community and vulnerable groups will be included during full proposal development (last paragraph section H, pg, 36) However, priorities/inputs from consultations are mentioned but not always clear how they will be implemented, e.g. the statement "these priorities directly informed project design...." (pg 36) is vague. Please further clarify the information presented. There is no mention of Indigenous Peoples or other distinct ethnic groups (see CR24)

Response: Not Cleared

Secretariat: CR23: Not Cleared. Additional information is needed. In Part IIH, please provide a summary table on the consultations conducted during the preparation of the CN. The table should include: the date of consultations, consulted groups/local communities, number of participants disaggregated by gender, topics discussed, outcomes and how they were reflected in project design. Also, include a brief paragraph to indicate that additional consultations will be conducted during the full proposal preparation stage. CR24: Cleared. Sufficient for CN stage. More details would be needed at full proposal stage. See Part IIH, pp. 34-35. CR25: Cleared. See CR24 above. (16 August 2026)

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

Response: Cleared

Secretariat: Yes, however, additional information is required. Part II I (pp 40 – 42) provides a generally sound "full cost of adaptation" rationale, distinguishing climate-driven additionality from baseline health system needs (e.g., climate-informed surveillance/EWS, climate-proofing of facility operations through energy/WASH resilience, and multisectoral One Health preparedness and workforce readiness). However, several inconsistencies require clarification to demonstrate that the USD 5 million request, on its own, will deliver the stated outputs and contribute meaningfully to the adaptation objectives. The section cites interventions that are not clearly included in the project design and budget (e.g., "community-based water harvesting systems," "loss of cultural heritage," and broad "MHPSS programming"). CR26: Please remove these examples or explicitly anchor them to defined, costed outputs. Where psychosocial elements are intended, please align references to the scope already described (e.g., Psychological First Aid and GBV-sensitive care within workforce training and emergency preparedness protocols). (First Technical Review, March 3, 2026)

Response: Cleared

Secretariat: CR26: Cleared Section II I, pg 36-39) Justification of cost is logical, and it integrates components, in the context of national funding scene. Examples not related to the project were removed.

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

Response: Cleared

Secretariat: No CR27: The alignment table in Part III A (pp 46 – 50) has to be revised according to the instructions provided in the following link: <https://www.adaptation-fund.org/wp-content/uploads/2025/11/Alignment-with-Adaptation-Fund-Results-Framework-Template-and-guidance-Nov-2025.docx> Please ensure the following: Upper section of the table: i) Enter the Project Objectives in the "Project Objective(s)" column; ii) Add the corresponding Project Objective Indicator(s) in the "Project Objective Indicator(s)" column; iii) For each Project Objective indicator, select only the most appropriate SRF Fund Outcome and enter it in the "Fund Outcome" column; iv) Select only the most relevant SRF Fund Outcome Indicator for each Fund Outcome and enter it in the "Fund Outcome Indicator" column; and v) Input the total project activity cost (USD 4,170,507) in the column "Grant Amount (USD)". Lower section of the table: i) List the five project outcomes listed in the project Components and Financing Table in the "Project Outcome(s)" column, along with their respective outcome-level indicators in the "Project Outcome Indicator(s)" column; ii) For each indicator, select only the most relevant corresponding SRF Fund Output and enter it in the "Fund Output" column; iii) Choose only the most relevant SRF Fund Output Indicator for each Fund Output selected and enter it in the "Fund Output Indicator" column; and iv) Input the grant amount for each Project Outcome in the "Grant Amount (USD)" column, again ensuring that the total equals the project activity cost of USD 4,170,507) Lastly, please ensure that all the Fund Outcomes associated with the listed Fund outputs in the lower section of the table are reflected in the upper section of the table. (First Technical Review, March 3, 2026)

Response: Cleared

Secretariat: CR27: Not Cleared The revision to Table in part III, A (pg 46-52) is noted. however, a. please present the grant amount as per AF output/outcome indicator. b. Please comply with template available at Results Framework Alignment Table (Amended in December 2025) (77 kB, DOC)

Response: Not Cleared

Secretariat: CR27: Not fully cleared. 1. As per the updated AF guidance of July 2026, change "Project Objective" in the upper part of the table (AF outcome level) to "Project Outcome", and "Project Objective Indicators" to "Project Outcome Indicators". Also, change "Project Objective" in the lower part of the table (AF output level) to "Project Output", and "Project Objective Indicators" to "Project Output Indicators". 2. The table should distinguish between two parts/ levels . Upper part of the table (AF outcome level) along with total allocated amount at outcome level, and lower part (AF output level) with total allocated amount at output level. Each of these totals should be equal to components total cost. 3. Distribute allocated amounts at AF outcome and output indicators. 4. Align project outcomes and indicators with AF outcomes and indicators. Same applies to project outputs. 5. Please revise the alignment table to ensure compliance with the updated AF guidance oof July 2026 found at: https://www.adaptation-fund.org/wp-content/uploads/2026/04/AF-SRF-Updated-templates_results-framework-table-and-results-framework-alignment-table.pdf (16 August 2026)

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

Response: Not Cleared

Secretariat: Yes, partially. Part II J (pp 42 – 43) f the CN reflects a clear intention to sustain adaptation benefits by embedding climate–health resilience within national systems (policy integration, institutional strengthening, surveillance/EWS, and institutionalized training). However, the sustainability narrative remains largely generic and includes activities not reflected in the project design, while key arrangements for sustaining infrastructure and digital systems beyond project end are not sufficiently articulated. The section does not adequately describe

all aspects of sustainability – environmental, social, institutional and financial. CR28: Please rearrange the Section to explain how sustainability will be addressed under the key headings of economic, environmental, social, institutional and financial sustainability. The CN does not explain the specific arrangements to sustain operation and maintenance (O&M) of proposed facility-level investments (e.g., solar energy systems and climate-resilient WASH upgrades), including responsibility, budgeting, and lifecycle considerations. CR29: Please briefly clarify the intended O&M arrangements for solar/WASH installations (institutional responsibility at facility/municipal/national level, maintenance approach, and how recurrent costs and lifecycle management will be addressed), consistent with the implementation arrangements described (e.g., UNDP's role in establishing O&M arrangements). While the CN emphasizes lasting surveillance and early-warning benefits, it does not specify how interoperable platforms and digital solutions (e.g., One Health surveillance platform and e-PHEM/PHEOC systems) will be hosted, maintained, and financed after project completion. CR30: Please indicate the intended institutional host(s), integration with existing national information systems, and high-level provisions for ongoing operation/support (including recurrent costs) to ensure sustainability beyond the project period. The CN does not describe how the project will enable replication and scaling-up with other funds, nor how financial sustainability will be supported through national/sub-national budgeting and governance processes. CR31: Please briefly outline the project's replication/scaling strategy. (First Technical Review, March 3, 2026)

Response: Not Cleared

Secretariat: CR28: Not cleared This section has not changed since first review. Sustainability plans are still very general and not all aspects of sustainability are addressed. Please rearrange the Section to explain how sustainability will be addressed under the key headings of economic, environmental, social, institutional and financial sustainability. CR29: Cleared O&M is clarified in page 26-27 under the Part II, A. CR30: Cleared. Clarified in Section II, A, pg 26-27. CR31: Not cleared project's replication/scaling strategy is not addressed, please address. CR5 (NEW): At Part II section J please clarify the sustainability mechanism for the surveillance activities proposed to ensure continuity of this intervention post project implementation.

Response: Not Cleared

Secretariat: CR28: Not fully cleared. See Part III, pp. 37-41. Revise Part III layout for more clarity and focus. The section should discuss under dedicated subheading the various key sustainability aspects (institutional, financial, economic, social, environmental, etc.) at project level not component level (integrate components discussion briefly and as appropriate under the key sustainability aspects subheadings), with due consideration to the sustainability of the O&M aspects of facilities to be developed by the project (please move the O&M discussion on p. 25 to Part III and utilize as needed). It should also highlight the potential replicability/ scaling up of the project outcomes with other sources of funds, after its completion. CR31: Cleared. However, see CR28 above. CR5 (NEW): Cleared See p. 38. (16 August 2026)

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 additional information is required Part II K (pp 43 – 45) presents an environmental and social (E&S) screening/checklist and indicates that an ESIA/ESMP will be prepared at Full Proposal stage, however, the concept note does not clearly state the overall AF ESP risk category (A/B/C) resulting from the screening. CAR1: Kindly provide the AF ESP risk category (A/B/C) and a brief justification, explicitly referencing the planned physical works (e.g., solar PV, WASH upgrades, and any associated waste streams). The CN suggests that certain interventions and/or locations may be identified and prioritized at Full Proposal stage. Given this

staged approach, it is unclear whether any activities or components will be treated as Unidentified Sub-Projects (USPs) under AF guidance (i.e., activities not yet defined to the level needed to identify E&S risks at concept stage). Clarifying this point is necessary to understand how screening, risk management instruments (e.g., ESMP), consultation, and grievance arrangements will be applied prior to implementation of site-specific works. CAR2: Kindly clarify whether any activities/components will be treated as Unidentified Sub-Projects (USPs) under AF guidance. If yes, please explain which activities would be considered USPs, why, and how USP risks will be screened and managed prior to implementation (including how this will be reflected in the ESMP/ESIA scope, stakeholder engagement, and grievance mechanisms). Please include this clarification in Section K, before the screening table. While Section K presents an E&S screening table, the screening table does not clearly and consistently demonstrate full consideration of the AF ESP principles that always apply (notably Principle 1 on compliance with the law, Principle 4 on human rights, and Principle 6 on core labour rights) in a way that is traceable to activities and mitigation measures. In addition, there are inconsistencies in referencing components/activities within the table. CAR3: Information presented should be revised as follows to better align with the Environmental and Social Policy of the Fund and its guidance document: i) for all principles for which impacts or risks were identified and for Principles 1, 4, 6 (which always applies), such impacts or risks should be described in the third column along with mitigation measures. ii) in the same third column, risks should be stated for all relevant principles. E.g.: instead of saying “The project will promote healthy soils and empower local farmers” you may say “There’s a risk that agrochemical waste may impact soil and water if not managed”. iii) the “No further assessment required for compliance” column should only be ticked for those principles for which impacts/risks were not identified. The ESP screening table includes an entry for “Indigenous Peoples” marked “No,” with a brief statement that Libya has no legally recognized indigenous peoples under the AF definition. However, the concept note does not explain the basis for this conclusion in relation to the preliminary geographic focus and the fact that final site prioritization will occur at Full Proposal stage. In addition, given that distinct ethnic minority communities may be present in parts of Libya (e.g., Amazigh, Tuareg and Tebu communities, where relevant), a brief clarification is needed on how the screening conclusion was reached and how it will be verified and updated (if required) once priority sites/communities are identified. CR32. Kindly explain the basis for the “Indigenous Peoples: No” screening conclusion (including how it relates to the preliminary target regions/municipalities). Please also describe how this conclusion will be verified during Full Proposal development once priority sites are confirmed, including whether any distinct ethnic minority communities (e.g., Amazigh, Tuareg and Tebu communities, where present) may be affected or require tailored engagement. If any such groups are identified, kindly explain how culturally appropriate engagement will be undertaken and reflected in the ESMP/ESIA and stakeholder engagement plan. (First Technical Review, March 3, 2026)

Response: Pending

Secretariat: CAR1: Cleared The AF ESP risk category (B) was provided and justification. (pg 39, last paragraph) Suggestion: no need to explain why project does not qualify as risk category A or C. CAR2: Not Cleared. Proposal states that some facility-level investment will be treated as USP. It explains in general terms how it will screen and managed before implementation. However please amend the section concerning USPs if at fully develop stage the sites and detailed works will be identified then the approved project will not have USPs. CAR3: i. Cleared Impact clarifies in column 3 for all principles ii. Cleared Risk statements follow the recommended format (e.g., There’s a risk that agrochemical waste may impact soil and water if not managed) iii. Not cleared Please please delete the text in column 2, instead please add a check mark (✓) to the principles that carry no risk (thus no further assessment required for compliance. Please note that for ESPs 1 4, and 6 further assessments will always be required so no X or checkmark should be indicated there. CR32: Not cleared There is no inclusion of indigenous people in the project, The Amazighs are distinctive indigenous group in Libya, and they constitute ~1 million people or 16% of the population (<https://iwgia.org/en/libya/5955-iw-2026-libya.html>). Please clarify i. how will the project respect FMIC through the process (design, implementation). How will the project impact IP.

ii How are IP involved in the process With this in mind, what are the risk to IP and how will the risk be mitigated. Please see feedback on March 3, 2026) CAR2 (NEW*): Please report level of risk for each of the 15 principles in column three as either low, medium or high . Please also include and indication of how the project will respond to/manage those risks.

Response: Cleared

Secretariat: CAR2: Cleared. See p. 41. CAR3: Cleared. See pp. 43-48. Please add table number and heading. Also revise section numbering typos for Part IIK. CR32: Cleared. See pp. 45-46. (16 August 2026)

Resource Availability

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

Response: Cleared

Secretariat: Yes. (First Technical Review, March 3, 2026)

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 fee is USD 391,705, which is 8.5% of the total budget before fee. The PFG of USD 150,000 is appropriate for a project of this size The PFG fee is lower than 8.5. However, there is a discrepancy between the values in the table and the description below for the Design of the Full Project Proposal and the Management Fee. In the table, the amount for the Project design is USD 12,000 while in the description it is USD 10, 000. Similarly, in the Table the amount for the Management Fee is USD 5000, while in the description it is USD 8000. CR33: Please correct the inconsistencies between the table and the description below and ensure that both sums do not exceed USD 150,000. CAR4: Please confirm if UNDP Libya will be executing the PFG or if WHO Libya will be doing so. (First Technical Review, March 3, 2026)

Response: Not Cleared

Secretariat: CR33: Not cleared Total project formulation cost and values for "Design of the full project proposal" are not consistent between the table and the narrative. Please make corrections. CAR4: Cleared 1. The PFG indicates that that UNDP Libya will be executing the PFG. Please clarify if this is the case for the PFG or if WHO will be executing the PFG. The note related to the PFG comments is not clear in the response sheet as it only indicates 'done'. 2. Please complete PFG budget notes column. 3. Signature is missing for IE representative, please insert for re-submission both in PFG request form and in the project concept at Part IV B .

Response: Cleared

Secretariat: CR33: Cleared. See PFG, p. 1. CAR4: Cleared, See PFG, pp. 1-4. (16 August 2026)

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 Execution Costs total is USD 437,788, which is 9.5% of the project total budget. However, the Total Project/Program Cost is incorrect in the Project Components and Financing table. CR34: Please note that the Total Project/Program Cost is the sum of the total components and execution costs; this must be corrected. You may use the IE and EE fees calculator: <https://www.adaptation-fund.org/document/ie-and-ee-fees-calculator/> (First Technical Review, March 3, 2026)

Response: Cleared

Secretariat: CR34: Not cleared Total Project Cost is correct in proposal table (pg. 20), however the total project cost reported in the AF portal is incorrect. It says 4,170,507, and it should be 4,608,295 like in the table.

Response: Cleared

Secretariat: CR34: Cleared. Total project cost reported in the AF portal is USD 4,608,295.

Response: Not Cleared

Secretariat: CR35: Project proposal and PFG form should be signed in the Implementing Entity certification section by the IE coordinator in our records: <https://www.adaptation-fund.org/apply-funding/implementing-entities/>

Eligibility of IE

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

Response: Cleared

Secretariat: Yes. Accreditation Expiration Date: 24 November 2028 (First Technical Review, March 3, 2026)

Implementation Arrangements

Is there adequate arrangement for project / programme management, in compliance with the Gender Policy of the Fund?

Response: Pending

Secretariat: n/a at concept stage (First Technical Review, March 3, 2026)

Response: Not Cleared

Secretariat: N/A

Are there measures for financial and project/programme risk management?

Response: Pending

Secretariat: n/a at concept stage (First Technical Review, March 3, 2026)

Response: Not Cleared

Secretariat: N/A

Are there measures in place for the management of for environmental and social risks, in line with the Environmental and Social Policy and Gender Policy of the Fund?

Response: Pending

Secretariat: n/a at concept stage (First Technical Review, March 3, 2026)

Response: Not Cleared

Secretariat: N/A

Is a budget on the Implementing Entity Management Fee use included?

Response: Pending

Secretariat: n/a at concept stage (First Technical Review, March 3, 2026)

Response: Not Cleared

Secretariat: N/A

Is an explanation and a breakdown of the execution costs included?

Response: Pending

Secretariat: n/a at concept stage (First Technical Review, March 3, 2026)

Response: Not Cleared

Secretariat: N/A

Is a detailed budget including budget notes included?

Response: Pending

Secretariat: n/a at concept stage (First Technical Review, March 3, 2026)

Response: Not Cleared

Secretariat: N/A

Are arrangements for monitoring and evaluation clearly defined, including budgeted M&E plans and sex-disaggregated data, targets and indicators, in compliance with the Gender Policy of the Fund?

Response: Pending

Secretariat: n/a at concept stage (First Technical Review, March 3, 2026)

Response: Not Cleared

Secretariat: N/A

Does the M&E Framework include a break-down of how implementing entity IE fees will be utilized in the supervision of the M&E function?

Response: Pending

Secretariat: n/a at concept stage (First Technical Review, March 3, 2026)

Response: Not Cleared

Secretariat: N/A

Does the project/programme's results framework align with the AF's results framework? Does it include at least one core outcome indicator from the Fund's results framework?

Response: Pending

Secretariat: n/a at concept stage (First Technical Review, March 3, 2026)

Response: Not Cleared

Secretariat: N/A

Is a disbursement schedule with time-bound milestones included?

Response: Pending

Secretariat: n/a at concept stage (First Technical Review, March 3, 2026)

Response: Not Cleared

Secretariat: N/A

CONCEPT NOTE PROPOSAL FOR SINGLE COUNTRY

PART I: PROJECT / PROGRAMME INFORMATION

Title of Project/Programme: Strengthen climate change adaptation and Health system preparedness, readiness and resilience to multi-hazard risks and climate impacts

Country: Libya

Thematic Focal Area: Disaster Risk Reduction

Type of Implementing Entity: Multilateral Implementing Entity

Implementing Entity: World Health Organization (WHO)

Executing Entities: UNDP
Ministry of Environment,
Ministry of Health,
Ministry of Local,
Ministry of Agriculture,
National Center for Disease Control,
National Center for Animal Health,
Ministry of Local Government, Environmental
Sanitation Affairs

Amount of Financing Requested: 5,000,000 (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: 4/20/2026

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Project/Programme Background and Context:

Geography: Libya is situated in the southern Mediterranean and is a large country of about 1.76 million km², with roughly 96% of its territory characterized by desert conditions. Libya is bordered by the Mediterranean Sea to the north (across from Italy, Greece, and Malta) with a long coastline stretching 1,770 km. Libya shares borders with Egypt to the east, Sudan to the southeast, Niger and Chad to the south, and Tunisia and Algeria to the west. Libya's main physical features include the Nafusah Plateau and the Al-Jifarah (Gefara) Plain in the northwest, both lying at relatively low elevations near sea level. In the northeast, the Akhdar Mountains also known as the "Green Mountains" with rise to about 900 meters. The remainder of the country is dominated by the vast Saharan plateau, which extends across most of Libya's territory. In the eastern end of the Sahara Desert is located the Nubian Sandstone Aquifer System, the world's largest known fossil water aquifer system, which spans across the south-west and south-east of Libya. This is the source of the Great Man-Made River: the world's largest irrigation project ever built. The water feeding the Man-Made River originate from several wells in Libya, including Alkufra municipality, where it is very superficial and therefore easily accessible.

Historically, Libya was divided into three provinces: Tripolitania in the northwest, Cyrenaica in the east, and Fezzan in the southwest. Today, the country is subdivided into 25 governorates. Libya experiences little and erratic rainfall; only limited areas, such as the Jifara Plain near Tripoli and the Marj Plain near Benghazi, receive enough rainfall for arable farming, and slightly more land is suitable for livestock grazing. Despite these constraints, Libya continues to operate several large-scale agricultural projects supplied by fossil groundwater.¹

Socio economic:

As of 2024, the country's population stood at 7.2 million, with 81% living in urban areas - most along the coast. According to Libya's National Economic and Social Development Board youth make up some 38 per cent of the population².

Libya is classified as an upper-middle-income country, the economy is heavily dependent on hydrocarbons, which comprised approximately 75%³ of government revenue between 2015 and 2022, making GDP highly sensitive to production levels and global prices driven by income fluctuations, and recurrent conflict. In 2024, according to the world bank, Libya GDP per capita was estimated at roughly at USD 6,569⁴. The 2024 Global Multidimensional Poverty Index (MPI) (using 2014 survey data) classifies about 2.0% of Libyans as multidimensionally poor and 11.4% as vulnerable to multidimensional poverty, highlighting pockets of deprivation in housing, employment and access to services despite relatively good national human development indicators⁵.

According to the latest World Food Programme Market Price Monitoring, the national Full Minimum Expenditure Basket (MEB) rose significantly by +8.2 percent in May 2025 to LYD 983.82 (153.60 USD), marking the highest monthly increase recorded so far in 2025. This follows a sustained multi-year upward trend: the Full MEB rose by 10.4% between December 2023 (LYD 865.06) and December 2024 (LYD 954.89), with prices ending 2024 some 18.0% higher than at its start⁶. This persistent erosion of household purchasing power directly amplifies climate

¹ World Bank. (2025, June 11). [CLIMATE RISK COUNTRY PROFILE: Libya](#).

² youth voices: towards a better future for all Libyans, July 2025

³ United Nations Libya. [Financing Landscape Analysis: Libya 2023](#), UN Libya.

⁴ World Bank. [GDP per capita \(current US\\$\) - Libya](#). World Development Indicators. Washington, DC: World Bank.

⁵ Multidimensional Poverty Index 2024, UNDP, 2024, Libya

⁶ Given the exchange rate fluctuations, the USD comparison is not meaningful.

vulnerability: when extreme weather events disrupt supply chains, damage crops, or cut off road access - as occurred in September 2024 when heavy rains closed southern supply routes, driving an additional 3.3% MEB spike in a single month - already-stretched household budgets leave the poorest Libyans with little capacity to absorb additional costs or maintain access to essential health services⁷.

The World Bank's latest comprehensive analysis of economies in fragile and conflict-affected situations (FCS) highlights a deepening economic crisis that has widened global inequality. The report covers 39 countries - including Libya - where average GDP per capita in Libya has declined by 1.8% annually since 2020, compared to 2.9% growth in other developing economies⁸.

Based on UNDP report, 2023 Libya Human Development Index (HDI) value of 0.721 which put the country in the High human development category, positioning it at 92 out of 193 countries and territories⁹.

Libya, a country of approximately seven million people, hosted 939,638 non-Libyans as of March 2026, compared with 787,326 in October 2024, according to IOM's Displacement Tracking Matrix reports (Rounds 60 and 54, Annexes 6 and 7). Over the past 18 months, the sharp increase in Sudanese nationals has represented the most significant demographic shift in Libya, reflecting the direct and substantial spillover of the Sudan crisis into the country.

Violence against Women and Children (VaW), inequalities, poverty and vulnerability:

In Libya, young people, especially young women, remain largely absent from formal decision-making bodies and governance institutions. Unemployment among youth remains alarmingly high. The labour market indicators show a low participation of Libyan women in the labour force of (25.7%) compared to (79%) for men.¹⁰

The 2023 National Youth Survey reported a 38.4% unemployment rate among those aged 15–34, while earlier estimates suggested that youth joblessness reached 51.5% overall and up to 65% in northern urban areas. Historically, unemployment has been even higher among young women (around 70%), despite their comparatively high educational attainment levels.

While gender equality (SDG5) is codified in many aspects of law, in Libya women's participation has been markedly constrained across political, and economic domains, with those living in rural or tribal communities especially restricted by entrenched social norms. As a result, Libya's standing on the Global Gender Inequality Index has deteriorated significantly, dropping from 41st place out of 162 countries in 2018 to 65th in 2022.¹¹

Climate hazards have disproportionate impacts on girls.

Female-headed households, internally displaced women, and migrant or refugee women experience heightened economic insecurity and exposure to violence. The Stockholm International Peace Research Institute (SIPRI) fact sheet dedicated for Libya highlights that

⁷ World Food Programme (WFP). (2025, January 15). [Libya Market Price Monitoring, December 2024](#). and World Food Programme (WFP). (2024, October 22). [Libya Market Price Monitoring, September 2024](#). Rome: WFP.

⁸ World Bank. (2025, June 27). [Fragile and Conflict-Affected Situations: Intertwined Crises, Multiple Vulnerabilities](#). Washington, DC. <https://hdr.undp.org/system/files/documents/global-report-document/hdr2023-24reporten.pdf>

¹⁰ "Women's empowerment and gender equality", UNDP Libya

¹¹ UNICEF Libya Annual Report 2024

climate shocks, forced displacement, and deteriorating livelihoods amplify violence risks, especially where access to safe shelters, healthcare, and psychosocial services is limited.¹²

Violence against women is simultaneously widely prevalent and a very stigmatized topic in Libyan society. There is a lack of accurate data, and it is severely under-reported due to stigma, fear of social discrimination and retaliation. For all these reasons, though in the absence of documented data, it is expected that Libya's climate vulnerabilities will disproportionately affect women and young girls in their communities.

Hazard Mapping:

A multi-sectoral, national, all-hazards health risk profile conducted in Libya in 2024 using the WHO STAR tool found floods, storms, movements of internally displaced persons (IDPs), and the influx of refugees and migrants to be very high risks. High-risk hazards included food- and water-borne diseases, neglected tropical diseases (NTDs), antimicrobial resistance (AMR), and respiratory pathogens with pandemic potential, among others. Libya remains at moderate risk of violent conflict, according to the 2025 INFORM score ranking, which places the country 48th out of 191 countries¹³, with a staggering 6.5 score for lack of coping capacity. Environmental degradation and climate change exacerbate these hazards, increasing the likelihood of disease emergence. Indeed, Libya has a high INFORM Climate Change Risk Index and borders Niger, Chad, and Sudan - countries all classified with a very high index.

The analysis of geographic hotspots and sectoral vulnerabilities was developed following the IPCC SREX framework, which defines exposure as the presence of people, assets, ecosystems, or services in locations that may be adversely affected by climatic events. Exposure scores were determined by overlaying spatial data on population distribution, infrastructure, economic activity, and ecological sensitivity in relation to the intensity of each identified hazard.

Region	Description	Key Exposed Areas	Exposure Level	Principal Hazards
R1	Northern coastal strip: Tripoli, Benghazi, Misrata, Al Jabal Al Akhdar	Urban settlements, ports, floodplains, estuaries	Very High	Flash floods, sea-level rise, saltwater intrusion, coastal erosion
R2	Coastal–semi-arid transition: Misrata, Sirte	Peri-urban areas, dry riverbeds, small farms	High	Flash floods, drought, land degradation
R3	Interior arid zone: Jafara Plain, Sirte Basin	Rural towns, wadis, oil facilities	Medium	Drought, desertification, infrastructure stress
R4	Hyper-arid south: Fezzan, Murzuq, Kufra	Oasis towns, informal settlements	Low	Drought, sandstorms, aquifer depletion
R5	Marine and coastal ecosystems	Coastal lagoons, wetlands, ports	High	Sea-level rise, storm surges, acidification

¹² Climate, Peace and Security Fact Sheet, Libya, Norwegian institute of international affairs/The Stockholm International Peace Research Institute, August 2024. <https://www.sipri.org/>

¹³ <https://drmkc.jrc.ec.europa.eu/inform-index/INFORM-Risk/Results-and-data>

Certain population groups are disproportionately exposed due to socioeconomic conditions and geographic location:

- Urban poor in R1 are clustered in flood-prone informal settlements. Pastoralists in R3–R4 face declining access to water and pasture. Women and children in all regions, particularly R2 and R4, suffer from poor access to health services, limited mobility, and high dependency on climate-sensitive livelihoods. Urban vulnerabilities are pronounced due to the concentration of population along the coast, particularly in Tripoli, Benghazi, and Misrata, which together host over 40% of the population. Challenges include flash flood risks from inadequate drainage (e.g., in Derna, Tripoli, Benghazi), urban heat stress amplified by the heat island effect, and intermittent water supply from the MMR. Vulnerable groups in informal settlements, including displaced and low-income populations, are at heightened risk. In rural or remote regions such as Murzuq or Alkufra, adaptive infrastructure and basic services remain severely limited. Such limitations are further compounded by extreme isolation and extreme climate events.

Climate Section:

(i) Observed climate trends:

- **Raise in temperature:** Between 1971 and 2020, Libya's mean temperature increased by 0.25°C per decade
- **Precipitation:** The average annual rainfall in Libya between 1991–2020 has been of 38.10 mm. Over the 50-year period of 1971–2020, most of the Mediterranean region, including northern Libya, has seen a consistent decline in precipitation and a reduction in the number of consecutive wet days.¹⁴
- **Floods:** Libya was already among the most arid countries globally¹⁵, nevertheless precipitation has further decreased by 1.6 mm per decade from 1971 to 2020. However, extreme rainfall events are expected to occur more often, increasing the risk of flooding and posing threats to infrastructure, public safety, and agricultural systems¹⁶.
- **Saltwater intrusion and seagrass loss:** coastal areas such as Jeffara Plain, Tripoli, Sirt, and Benghazi are particularly affected. Excessive freshwater extraction, combined with climate change, has led to saltwater intrusion into aquifers, particularly in regions like Derna, where freshwater availability has decreased by 75% since 1960¹⁷.
- **Sand and dust storms (SDS)** have intensified in frequency and geographic spread, particularly in Libya's arid and hyper-arid interior. Between 2010 and 2022, the number of SDS days per year has increased by approximately 30%, with events occurring year-round but peaking in spring and late summer. These storms frequently reduce visibility to less than 500 meters, disrupt air and road traffic, and pose serious health risks through respiratory complications. The interior basins of Murzuq, Sabha, and Wadi Al Hayat are among the most affected, with over 100 SDS days per year reported in some locations¹⁴.
- **Coastal erosion** has become a critical hazard along Libya's Mediterranean littoral, affecting densely populated cities such as Tripoli, Misrata, Benghazi, and Derna. Erosion rates now average 30–50 cm per year in several vulnerable segments, with some localities exceeding 1 meter per year, particularly where coastal dunes and wetlands have been disturbed. This erosion is driven by storm surge activity, unregulated urban expansion,

¹⁴ World Bank. (2025, June 11). *CLIMATE RISK COUNTRY PROFILE: Libya*.

¹⁵ Food and Agriculture Organization of the United Nations (FAO). (n.d.). [Libya: Country Profile](#).

¹⁶ World Bank. (2025, June 11). [CLIMATE RISK COUNTRY PROFILE: Libya](#).

¹⁷ Adaptation Chapter of the NDC, November 2025

and declining sediment supply from inland catchments. Ports, seawalls, roads, and residential areas have been repeatedly damaged during winter cyclonic storms¹⁴.

(ii) Projected future climate events (including horizon and scenario where available):

Raise in temperature: Under the SSP3-7.0 ensemble, Libya's annual mean temperatures nationwide are projected to increase further, from 22.20°C during the historical reference period of 1995–2014 to 23.12°C (22.20°C, 10th percentile, 24.01°C, 90th percentile) for the period 2020–2039, and to 23.95°C (23.01°C, 25.06°C) for the period 2040–2059.

Projected Precipitation: Climate change is expected to cause a long-term decrease in the average Libya's annual precipitation levels, but interannual variability remains remarkably high. The decreasing nationwide trend becomes significant around 2050 for SSP3-7.0, and a decade earlier for SSP5-8.5. Libya will experience more Mediterranean influences in the north (decrease in precipitation) and Sahel-type trends in the desertic south (slight increase in precipitation)¹⁸

The Mediterranean region is warming 20% faster than global average¹⁹. This means that the Mediterranean Sea is turning into the fastest warming sea with irreversible changes for marine and human life, with thousands of sea species already migrating and replacing endemic ones²⁰.

Projected Vulnerability under the Shared Socioeconomic Pathway SSP5 (2025–2045)

Libya's vulnerability to climate change is shaped not only by its environmental exposure, but also by deep-rooted social and economic inequalities that affect the adaptive capacity of its people. The intersection of hazard-prone geographies, fragile livelihoods, and structural marginalization places specific population groups-particularly women, youth, pastoralists, internally displaced persons (IDPs), and the urban poor-at the center of climate risk.

Region	Urban Poor	Pastoralists	Women	Children	Exposure Level (Summary)
R1 – Coastal urban corridor	Very High (90)	Low (30)	Very High (90)	Very High (90)	High multi-hazard exposure due to floods, heatwaves, and infrastructure failure
R2 – Peri-urban/agro-pastoral	High (70)	Medium (50)	High (70)	High (70)	Transitional zone under land pressure and rapid urban expansion
R3 – Rural interior	Medium (50)	High (70)	High (70)	High (70)	Increasing drought and service gaps
R4 – Southern oases and deserts	Low (20)	Very High (80)	Medium (40)	Medium (40)	Sparse but highly fragile, water-dependent livelihoods.

Source: CRA Libya, 2025

(iii) Climate impacts/risk pathways relevant to health outcomes:

Climate change is increasingly recognized as a major threat to health and development, as highlighted in the WHO COP30 Special Report (2025). In Libya, it poses significant risks to

¹⁸ World Bank (2025, June 11) Climate Risk Country

¹⁹ Climate change in the Mediterranean

²⁰ Mediterranean is turning into the fastest warming sea with irreversible changes for marine and human life, WWF article, 2021

sustainable development, affecting health, infrastructure, energy systems, and agricultural productivity. The country is highly exposed to **extreme heat, floods, water scarcity, sand and dust storms, and desertification**, all of which increase the risk of infectious diseases, including vector-, water-, and food-borne illnesses²¹. The devastating impact of the Storm Daniel in September 2023, which caused dam collapses, widespread flooding, over 52,000 displacements, and thousands of deaths, highlighted the country's acute vulnerability to climate shocks and their severe social and health consequences, particularly for women and vulnerable populations²². Water and food security remain critical challenges. Libya relies almost entirely on non-renewable groundwater, with the Great Man-Made River supplying around 80% of freshwater, making the country highly vulnerable to over-extraction, infrastructure failure, and conflict-related disruptions. Agriculture and livestock, which support livelihoods for a significant portion of the population, are increasingly affected by rising temperatures, drought, and soil degradation, while dependence on food imports (approximately 75%) heightens exposure to global supply shocks. These pressures are compounded by weak governance, fragile infrastructure, and transboundary challenges, including shared water resources and climate-driven migration, further straining already limited services and increasing overall vulnerability^{23, 24}.

National health sector structure and capacities:

(i) What currently exists

Surveillance/EWS: Libya has baseline public health surveillance and disease reporting functions through the Ministry of Health and the National Center for Disease Control (NCDC), as well as established national laboratory functions and routine outbreak detection mechanisms. The 2018 JEE and subsequent WHO health security work confirm that Libya has foundational surveillance and laboratory capacities. Libya has baseline surveillance and reporting capacities, but these remain uneven in depth and interoperability. The 2018 Joint External Evaluation (JEE) assigned Libya a score of 3 for priority diseases under surveillance and core indicator-based surveillance capacities, but only 2 for syndromic surveillance, 2 for event-based surveillance, and 1 for an interoperable, interconnected, electronic real-time reporting system, indicating that a basic surveillance foundation exists but remains only partially integrated and not fully digitized.²⁵

Emergency Preparedness: Libya has among the lowest levels of preparedness and readiness to effectively respond to these climate impacts. The country ranks 91st in vulnerability and 167th in preparedness out of 185 nations. According to the 2023 Fragile States Index, Libya is classified among the world's most fragile states, ranking 17th out of 179 countries²⁶. Libya has baseline emergency preparedness architecture through national health emergency coordination functions, IHR structures, and recent WHO-supported preparedness processes, including national risk profiling in 2024. However, the 2018 JEE shows that these capacities are still limited in operational depth: Libya scored 2 for multi-hazard public health emergency preparedness and response

²¹ Mora C, McKenzie T, Gaw IM, et al. Over half of known human pathogenic diseases can be aggravated by climate change. *Nature Clim Chang* 2022; 12: 869–75

²² Lancet countdown report 2025

²³ Climate, Peace and Security Fact Sheet, Libya Norwegian institute of international affairs/The Stockholm International Peace Research Institute, August 2024

²⁴ United Nations Development Programme (UNDP) Libya annual report for 2023

²⁵ Libya JEE 2018, <https://www.who.int/publications/i/item/WHO-WHE-CPI-2019.37?utm>

²⁶ https://climateknowledgeportal.worldbank.org/sites/default/files/country-profiles/16998-WB_Libya%20Country%20Profile-WEB.pdf

planning and 2 for emergency response operations, indicating that preparedness structures exist but remain only partially functional.

Facility Resilience: Libya has an existing network of hospitals and primary health care (PHC) facilities that continues to serve as the backbone of health service delivery across the country. According to the WHO Service Availability and Readiness Assessment (SARA), Libya's public health system includes 97 public hospitals and 1,355 primary health care facilities, providing an important platform for the delivery of essential health services nationwide. The same assessment found that, despite major disruptions, basic and specialized services remained available across the country, although 17% of hospitals and 20.1% of PHC centres were closed at the time of assessment, with important disparities in staffing, service readiness and access to supplies²⁷.

(ii) Climate related limitations and gaps currently observed

Surveillance/EWS: Current surveillance and early warning systems are not yet sufficiently climate-informed, interoperable, or multisectoral for climate-sensitive threats. anticipatory action for climate-sensitive threats such as flood-related disease outbreaks, heat-related morbidity, or water-borne risks²⁸.

Emergency Preparedness: Libya's preparedness systems are not yet sufficiently adapted to increasingly frequent, complex, and compound climate-related shocks. The 2018 JEE found major limitations in emergency operations, indicating that while some preparedness structures exist, they are not yet robust enough for climate-related multi-hazard planning, rapid activation, and sustained coordinated response.

Facility Resilience: Health facilities remain vulnerable to extreme heat, flooding, water scarcity, and electricity disruption. Evidence from the Derna floods showed how extreme rainfall and cascading infrastructure failure led to major damage to health facilities, interruption of services, and strain on the health system. This demonstrates that existing facilities are not sufficiently climate-resilient to maintain continuity of care during severe weather and related system failures. The project aims to address weak continuity of care under climate stress, including facility exposure to heat, flood damage, unstable electricity supply, and water and sanitation disruption. It also aims to address the limited availability of resilient energy and WASH systems needed to maintain essential services during climate shocks.

(iii) Barriers the project aims to address:

Surveillance/EWS: The project aims to address limited integration of climate information into surveillance, weak interoperability between systems, insufficient multisectoral information-sharing, and the lack of timely, actionable early warning for climate-sensitive health threats. These barriers reduce the ability to move from reactive outbreak response toward anticipatory climate-risk management.

Emergency Preparedness: The project aims to address inadequate climate-informed preparedness planning, weak emergency procedures, insufficient operational readiness for multi-hazard events, and limited preparedness capacity for compound climate-health emergencies.

27 Service availability and readiness assessment summary report 2017

https://www.emro.who.int/images/stories/libya/libya_sara_summary_report_2017-final2.pdf?utm

28 One Health integrated surveillance for priority zoonotic and vector-borne diseases in Libya Tunis, 7-11 July 2025

<https://doi.org/10.5281/zenodo.18656715>

These barriers are especially important in Libya's fragile context, where floods, heat, displacement, service disruption, and disease risk can interact.

Facility Resilience: The project aims to address weak continuity of care under climate stress, including facility exposure to heat, flood damage, unstable electricity supply, and water and sanitation disruption. It also aims to address the limited availability of resilient energy and WASH systems needed to maintain essential services during climate shocks.

(iv) How the proposed activities will address the stated gaps/barriers

Surveillance/EWS: The proposed activities will strengthen climate-informed surveillance and early warning by improving the use of climate-health risk information, enhancing cross-sector data-sharing, and supporting earlier detection and interpretation of climate-sensitive threats.

Emergency Preparedness: The proposed activities will address preparedness barriers by integrating climate risk into planning, strengthening operational readiness, improving procedures and emergency coordination functions, and building workforce capacity to prepare for and respond to climate-related multi-hazard events.

Facility Resilience: The proposed activities will improve facility resilience through climate shocks and resilient and emergency ready health facilities, energy and WASH measures designed to reduce vulnerability to heat, floods, power instability, and water shortages. These measures will support continuity of care in selected facilities.

Observed Health events related to Climate change:

Infectious diseases: In Libya climate change increase the risk vector borne disease such as **rift valley fever** and **Leishmaniasis** caused by *L. major* remains a public health concern in including Algeria, Morocco, Tunisia and Libya.²⁹

Mental Health: In Libya, impacts of climate change have been reported on mental Health. Climate-related anxiety, depression, and grief are more prevalent in Libya than in other Arab countries, with high levels of obsessive-compulsive symptoms and physical stress due to environmental changes³⁰.

Climate change and child health: Climate change is impacting the health and well-being of children and adolescents, affecting their mental and physical health, nutrition, safety and security, access to learning opportunities, as well as family support and connectedness. In 2021, UNICEF released the landmark Children's Climate Risk Index (CCRI), laying out for the first time specific children's vulnerabilities across eight climate and environmental shocks. Libya exposure to climate and environmental factors is scored at 5.5 (high), with an overall CCRI of 4.4 and placing Libya on the 97th position on the score ranking, significantly worse than neighbouring country Tunisia, in position 121.

Climate change and people with disabilities (PWD): According to the UN's Common Country Analysis, 2021, the number of disabled people in Libya is estimated to be between 2.9 per cent

²⁹ Karmaoui A, Sereno D, El Jaafari S, Hajji L. Seasonal Patterns of Zoonotic Cutaneous Leishmaniasis Caused by *L. major* and Transmitted by *Phlebotomus papatasi* in the North Africa Region, a Systematic Review and a Meta-Analysis. *Microorganisms*. 2022 Dec 2;10(12):2391.

³⁰ Arnout BA. An epidemiological study of mental health problems related to climate change: A procedural framework for mental health system workers. *WOR*. 2023 Jul 11;75(3):813–35

to 14.3 per cent of the population, with many life-long disabilities caused by conflict. Within crisis affected communities, children and adults with disabilities are usually among the most marginalized, but do not benefit from humanitarian assistance and face challenges in accessing basic services.³¹

PWD are 4 times more likely to die in the event of a disaster³². During flood, they are still too often left behind and during heatwaves, the existing health inequalities are exacerbated, especially in communities where disability is still highly stigmatized like Libya.

Projected Health threats linked to Climate change: Flooding such as Derna disaster, can cause wastewater overflows, septic system failures, and combined sewer discharges, leading to contamination of nearby surface and groundwater sources. Such contamination increases the risk of waterborne diseases caused by bacterial pathogens like *Vibrio spp*, including cholera. Recent evidence shows that *Vibrio* bacteria can thrive in saltwater, freshwater, and brackish environments, creating ideal conditions for their proliferation and transmission following storms and floods³³.

The country's geographic location, bordering several African nations, also increases its susceptibility to transboundary health threats, including climate sensitive zoonotic and vector-borne diseases³⁴.

The projected decrease in rainfall combined with more frequent and intense precipitation events affect flooding risk. Flash floods will become more frequent due to intense rain events combined with overall drier conditions.³⁵ These climatic conditions will lead to higher transmission of **vector-borne diseases such as Malaria, Dengue and Leishmaniasis, waterborne disease such as such as cholera and acute diarrhoea**. Enhancing water and sanitation infrastructure, alongside strengthening disease surveillance systems, can significantly reduce vulnerability. These measures also provide important mitigation co-benefits by preventing disease outbreaks and enabling timely detection and response during health emergencies. In addition, increasing temperatures, prolonged heatwaves and sand and dust storms **intensify respiratory and cardiovascular stress**, degrade air quality and disrupt already fragile service delivery. More frequent extreme rainfall and flash floods, particularly in the coastal and peri-urban corridors, damage health infrastructure, contaminate water supplies and trigger spikes in water- and vector-borne diseases. Sea-level rise and coastal erosion increase salinization of groundwater and reduce safe water availability for coastal communities. These shocks disproportionately affect women, children, people with disabilities, internally displaced persons, migrants, refugees and poor urban and rural households, who are more exposed, have fewer coping options and face greater barriers in accessing care.

These challenges are exacerbated by prolonged political instability, armed conflict, and weakened healthcare infrastructure^{36,37}. It is recognized that Libya's vulnerabilities to climate change is not

³¹ <https://unsmil.unmissions.org/en/international-day-disabled-persons-disabled-woman-campaigns-more-recognition-and-equality>

³² [How climate change impacts people with disabilities, HI article](#)

³³ Lipp EK, Huq A, Colwell RR. Effects of global climate on infectious disease: the cholera model. Clin Microbiol Rev. 2002 Oct;15(4):757-70. doi: 10.1128/CMR.15.4.757-770.2002. PMID: 12364378; PMCID: PMC126864.

³⁴ Al-Hammami, M. A., & Al-Hammami, A. M. (2024, March 19). [Assessing One Health capacities for transboundary zoonotic disease surveillance in Libya](#). PLOS Global Public Health, 4(3), e0002005.

³⁵ World Bank. (2025, June 11). [CLIMATE RISK COUNTRY PROFILE: Libya](#).

³⁶ World Bank. (2025, June 11). [CLIMATE RISK COUNTRY PROFILE: Libya](#).

³⁷ European Commission. (n.d.). [Action Document for Towards a resilient health system in Libya](#).

solely determined by the frequency or magnitude of climatic hazards, but by a complex interplay of environmental degradation, climate-sensitive health risks, and a fragile health system and a set of long-standing contextual conditions that shape the capacity to respond and adapt necessitating an integrated and adaptive response.

The country's health system has been severely weakened by years of conflict, corruption, and infrastructure damage. Surveillance systems are fragmented, laboratory capacity is limited, and access to healthcare remains unequal, particularly in remote and conflict-affected regions.

These interconnected environmental and governance vulnerabilities underscore the urgency of a multi-sectoral, all hazard and One Health–centered approach that integrates climate resilience, public health protection, and sustainable resource management at both national and subnational levels.

Project/Programme Objectives:

Goal: *Strengthen a climate-resilient health system capable of preparing for, responding to and reducing the impacts of climate-related multi-hazard threats.*

Objectives:

- 1- Strengthen the evidence base to predict and mitigate health impacts of climate change**
Enhance data generation, analysis, to better predict, and address the health impacts of climate change. This objective focuses on improving the understanding of Health system vulnerabilities by identifying climate-sensitive health risks and vulnerable populations, supporting evidence-informed policies and interventions. It aligns with WHO GPW 14 priorities on strengthening data and intelligence for health and contributes to the development of national climate and health observatories for early warning systems under a One Health approach.
- 2- Enhance health system climate resilience through multi-level governance and strategic partnerships and collaboration**
Improve the capacity of health systems to anticipate, prepare for, and respond to climate-sensitive health risks, aligning with WHO GPW14 indicators on climate-resilient health systems and fostering effective collaboration among human health, animal health, and environmental sectors.
- 3- Improve the resilience and sustainability of healthcare facilities in the face of climate change**
Strengthen health infrastructure to withstand climate-related hazards by integrating climate-resilient design, sustainable energy solutions, and robust WASH systems, ensuring continuous, safe, and equitable service delivery under extreme weather conditions.
- 4- Strengthen disease surveillance and early warning systems to better prepare, respond, and recover from potential extreme climate events:**
establish and strengthen integrated surveillance and early warning systems for climate-sensitive zoonotic and vector-borne diseases, for early detection and rapid response.
- 5- Enhance workforce preparedness and operational readiness capacity to climate-related health risks:**
build the capacity of health professionals and communities in climate change adaptation and One Health principles

Strengthen climate resilience in Libya's health system by institutionalizing multi-level governance and strategic partnerships under Ministry of Health leadership, including a National Climate-

Health Steering Committee and decentralized regional teams to ensure coordinated implementation and accountability. Integrate climate adaptation into national health financing through dedicated contingency mechanisms and risk-based resource allocation to sustain procurement, supply chains, and climate-resilient cold-chain systems during emergencies. At the community level, leverage national NGOs and volunteer networks to enhance public health literacy, build trust, and deliver culturally appropriate risk communication and early warning messages, ensuring inclusive engagement of vulnerable populations and strengthening community participation in climate-resilient health responses.

Project/Programme Components and Financing:

Project/Programme Components	Expected Outcomes	Expected Concrete Outputs	Amount (US\$)
1. Strengthen the evidence base to predict and mitigate health impacts of climate change	1.1 Evidence-based climate and health risk information is regularly generated, disseminated and used for decision making	Output 1.1.1 - National V&A, multi-hazard and health infrastructure risk assessments completed Includes the completion of: Climate–health Vulnerability & Adaptation (V&A) assessment Multi-hazard risk assessment for health Climate-resilient health infrastructure risk assessment <i>3 linked technical assessments: (i) climate-health V&A assessment across all 25 governorates; (ii) multi-hazard risk mapping (flooding, heatwaves, drought, SDS) on health service delivery; (iii) climate-resilient infrastructure risk assessment for priority facilities. Deliverables: 3 validated technical reports, geospatial risk maps, and a consolidated risk dashboard, endorsed by MoH and Ministry of Environment.</i>	440,000
		Output 1.1.2 - Climate–health adaptation strategies and planning tools developed Includes national and sub-national adaptation strategies aligned with NAP/NDC. <i>Operational planning tools for national and sub-national health authorities: climate-risk screening checklists, adaptation option menus for 4 priority hazards (flooding, heatwaves, drought, SDS), and guidance for integrating climate risk into annual health planning. Validated through national workshop with MoH, NCCC, and sub-national health directors. Aligned with Libya's emerging NAP and NDC adaptation chapter.</i>	120,000
		Output 1.1.3 - Technical capacity strengthened for monitoring climate variability and health-relevant climate projections Includes training and installation/use of analytical tools to track rainfall, drought, floods, temperature extremes. <i>Training of national technical staff from MoH, NCDC, NMC and Ministry of Environment in climate data analysis and health-impact projection; installation of analytical software platform; development of 1 standardised climate-health monitoring protocol formally adopted by MoH.</i>	100,000
		Output 1.1.4 - Climate–health evidence products disseminated and accessible to decision-makers and communities Includes dissemination of assessment reports, policy briefs, geospatial maps, and lessons learned. <i>Production and dissemination of evidence products including policy briefs targeting national decision-makers, Arabic-language public factsheets, geospatial vulnerability maps, and an annual climate-health review report. Includes national dissemination workshops and integration into MoH planning processes.</i>	140,000
			80,000

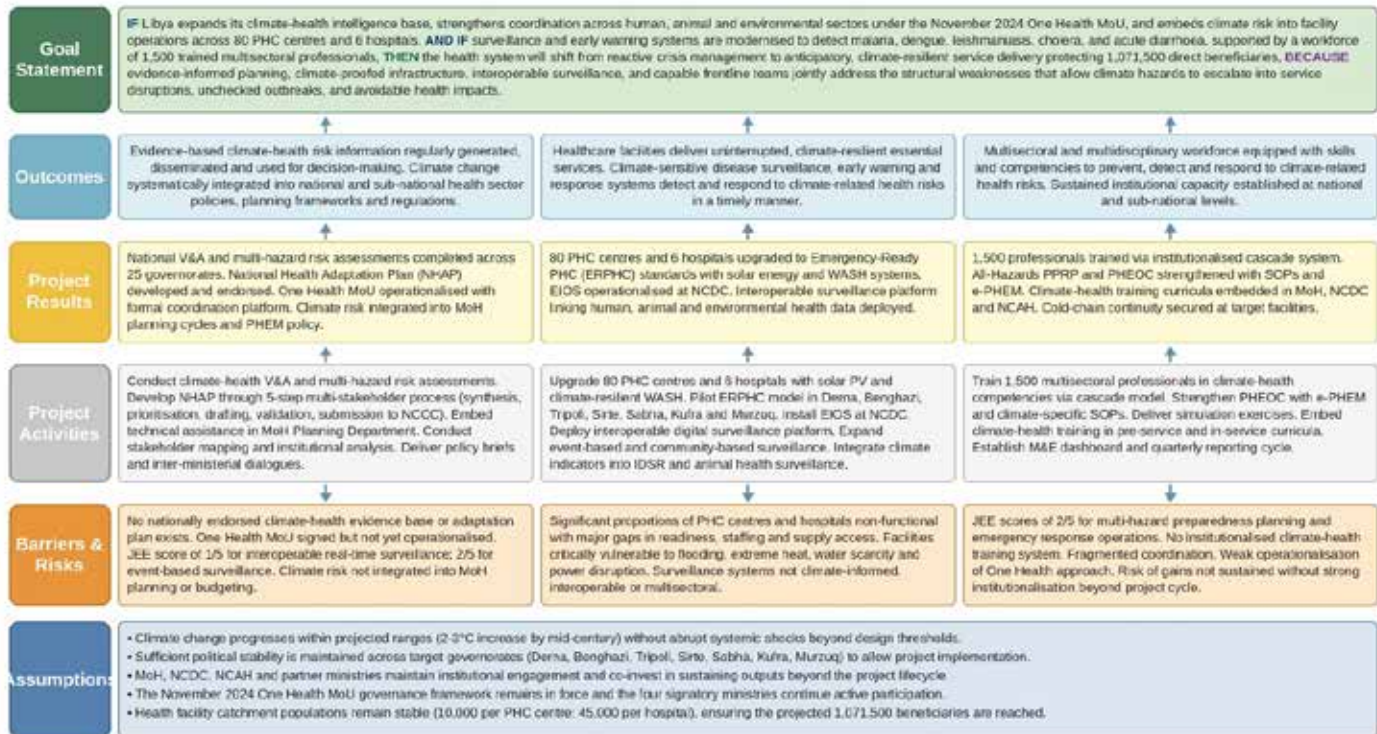
2. Enhance health system climate resilience through policy integration and multisectoral collaboration	2.1. Climate change is systematically integrated into national and sub-national health sector policies, planning frameworks and regulations	Output 2.1.1 – National Health Adaptation Plan developed <i>A WHO H-NAP-aligned sector adaptation plan produced through 5 sequential steps: (i) climate-health risk synthesis from Output 1.1.1; (ii) adaptation option prioritisation across 6 health system building blocks; (iii) multi-stakeholder drafting workshops with MoH, NCDC, Ministry of Environment, Ministry of Agriculture, and CSOs; (iv) national validation conference; (v) formal submission to NCCC for integration into Libya's NAP. Deliverables: 1 nationally endorsed NHAP with costed implementation roadmap, M&E framework, and Arabic-language summary for sub-national distribution.</i>	620,000
			120,000
		Output 2.1.2 – Comprehensive stakeholder mapping and institutional analysis conducted <i>Peer-reviewed mapping of all climate-health mandated actors at national and sub-national levels. Produces 1 institutional analysis report and 1 stakeholder engagement matrix, directly informing Outputs 2.1.3 and 2.1.4.</i>	80,000
		Output 2.1.3 – Policy briefs, high-level dialogues and sensitization activities implemented to support climate-health integration <i>Arabic-language policy briefs targeting Ministers and municipal councils; inter-ministerial dialogues on climate-health integration; sub-national sensitization events in high-risk governorates, including Derna, Benghazi, Tripoli, Sirte, Sabha, Kufra and Murzuq.</i>	80,000
		Output 2.1.4 – Institutional capacity of MoH and relevant agencies strengthened to integrate climate change into health sector planning <i>Technical assistance within MoH Planning Department to integrate climate risk screening into health sector planning, budgeting, and procurement cycles. Includes development of a climate-proofing checklist for health investment decisions and establishment of a dedicated climate-health desk within MoH with documented SOPs.</i>	120,000
		Output 2.1.5 – All-Hazards Prevention, Preparedness and Response Plan developed <i>WHO-facilitated participatory process with MoH, NCDC, Civil Protection, and municipal health teams. Covers 4 priority climate hazards. Deliverables: 1 nationally endorsed AHPPRP with hazard-specific annexes, trigger thresholds, and response protocols, formally submitted to Libya's Emergency Management System.</i>	100,000
		Output 2.1.6 – Public Health Emergency Management (PHEM) policy aligned with One Health and climate-related threats <i>Review and revision of existing PHEM policy to incorporate climate-sensitive disease risks and One Health principles. Deliverables: 1 revised PHEM policy document endorsed by MoH; 1 legal/regulatory gap analysis.</i>	40,000
	2.2. A functional One Health coordination mechanism strengthens multi-sectoral collaboration on climate sensitive health risks	Output 2.1.7 – National multisectoral Public Health Emergency Operations Center (PHEOC) strengthened with SoPs and digital solutions such as e-PHEM for climate-related health emergencies <i>Installation of e-PHEM digital emergency management software; development of climate-specific SOPs; training of PHEOC staff. SOPs validated through simulation exercises.</i>	80,000
		Output 2.2.1 – One Health national coordination platform established and operational <i>Operationalises the November 2024 One Health MoU (signed by MoH, Ministry of Environment, Ministry of Agriculture, and Ministry of Local Governance) by establishing a formal inter-ministerial coordination platform with endorsed terms of reference, secretariat hosted at MoH/NCDC, regular meetings, and linkage to NCCC. Deliverable: 1 joint annual work plan adopted; platform building on existing AICS/EU-supported One Health initiatives.</i>	240,000
		Output 2.2.2 – Regular One Health Task Force meetings convened to support coordinated climate-health action <i>One Health Task Force meetings facilitated across the project period with representation from human health, animal health, and environmental health sectors plus CSOs. Deliverables: meeting records, joint technical reports, and documented action register.</i>	80,000

		Output 2.2.3 – Mechanisms for sustainable multisectoral planning and policy integration across human, animal and environmental health strengthened <i>Inter-sectoral information-sharing agreements across human, animal and environmental health authorities; shared climate-health data repository; climate-health considerations formally integrated into sectoral plans.</i>	80,000
3. Improve the resilience and sustainability of healthcare facilities in the face of climate change	3.1. Healthcare facilities deliver uninterrupted, climate resilient and environmentally sustainable essential services	Output 3.1.1 – Emergency-Ready Primary Healthcare (ERPHC) and enhanced hospital resilience model piloted in high-risk priority locations <i>WHO Emergency-Ready PHC model applied in priority health facilities from the 80 PHC centres and 6 hospitals targeted by the project, focused on climate-exposed areas including Derna, Benghazi, Tripoli, Sirte, Sabha, Kufra and Murzuq. Covers facility climate-risk assessment, minimum resilience standards checklist, and structural adaptation planning. Deliverables: facilities upgraded to ERPHC standards; 1 replication toolkit for national scale-up; 1 pilot evaluation report</i>	1,350,000
		Output 3.1.2 – Health workforce capacities strengthened for climate-sensitive disease management, IPC, GBV-sensitive care and Psychological First Aid <i>Cascade training of health workers across 80 PHC centres and 6 hospitals in climate-sensitive disease management (malaria, dengue, leishmaniasis, cholera, acute diarrhoea), IPC, GBV-sensitive care, and Psychological First Aid. Training curriculum formally accredited by MoH. Contributes to the project target of 1,500 trained professionals; deliverables disaggregated by sex and cadre.</i>	210,000
		Output 3.1.3 – Facility performance-improvement and mentorship systems institutionalised for continuous climate-health readiness <i>Mentorship and supervision programme across 86 target facilities (80 PHC centres + 6 hospitals) using standardised climate-health readiness checklists. Includes annual facility performance review disaggregated by region and facility type.</i>	180,000
		Output 3.1.4 – Surveillance, reporting, and referral linkages between PHC facilities and national/local authorities strengthened for climate-sensitive diseases <i>Digital reporting tools installed at 80 PHC centres; referral SOPs for climate-sensitive diseases developed and tested through simulation; facilities connected to national reporting system.</i>	120,000
		Output 3.1.5 – Solar energy systems installed in high-risk health facilities to ensure climate-resilient and uninterrupted essential services <i>Solar PV systems with battery storage installed in priority facilities selected from the 80 PHC centres and 6 hospitals in climate-exposed areas with high grid unreliability - building on and extending UNICEF's existing solarization of 30 PHC centres. Systems sized to power essential services including refrigeration, lighting, and medical equipment. Includes O&M training and performance monitoring. Combined catchment population of target facilities: 1,071,500 people.</i>	140,000
		Output 3.1.6 – Climate-resilient WASH systems upgraded in priority health facilities to safeguard service continuity under climate stress <i>WASH infrastructure upgraded in priority health facilities in flood- and drought-exposed areas: rainwater harvesting, water storage, flood-proofed sanitation, and solar-powered water pumping. All upgrades to WHO WASH in Health Care Facilities standards. Deliverables: facilities upgraded with pre- and post-upgrade WASH assessments; O&M protocols established at each site.</i>	450,000
4. Strengthen disease	4.1. Climate-sensitive disease surveillance, early	Output 4.1.1 – Climate-informed early warning and surveillance systems assessed and strengthened for climate-sensitive diseases	250,000
			660,000
			80,000

surveillance and early warning systems for climate related health risks	warning and response systems detect and respond to climate-related health risks in a timely manner	<i>Systematic gap analysis of existing disease surveillance and EWS platforms against climate-health integration requirements. Deliverables: 1 gap analysis report; 1 EWS strengthening plan endorsed by MoH/NCDC; interoperability roadmap with existing platforms including Libya Mozn, ensuring no parallel platform is created.</i> Output 4.1.2 – Routine surveillance systems adapted under the One Health approach to include climate-relevant information <i>Climate-relevant indicators (rainfall, temperature anomalies, SDS events) integrated into IDSR and animal health surveillance. Revised notification forms, threshold definitions, and alert protocols for priority climate-sensitive diseases: malaria, dengue, leishmaniasis, cholera, and acute diarrhoea. Training of surveillance officers nationally.</i> Output 4.1.3 – Disease intelligence capacities enhanced through strengthened event-based surveillance (EBS) <i>EBS formalised in high-risk areas; EIOS (Epidemic Intelligence from Open Source) installed and operationalised at NCDC, building on WHO's initial EIOS training in Libya; signal verification and response protocol endorsed by NCDC.</i> Output 4.1.4 – Community-Based Surveillance (CBS) expanded for climate-sensitive health events with participation of CSOs, women, youth, schools and vulnerable groups <i>CBS networks established in high-risk communities engaging CSOs, schools, women's groups and youth networks as signal reporters. Arabic-language reporting tools developed. First quarterly CBS signal report produced.</i> Output 4.1.5 – Interoperable and integrated electronic surveillance platform developed for human–animal–environmental health with real-time data sharing <i>Integrated digital surveillance platform linking human, animal, and environmental health data streams; real-time dashboards accessible to MoH, NCDC, and sub-national health authorities. Open-source architecture compatible with existing national systems; data-sharing agreements across relevant ministries.</i> Output 4.1.6 – Climate-sensitive disease surveillance plans, SOPs and simulation exercises developed and institutionalized <i>Disease-specific surveillance plans for priority climate-sensitive diseases (malaria, dengue, leishmaniasis, cholera, acute diarrhoea); national SOP compendium endorsed by NCDC; national simulation exercises with corrective action plans.</i>	90,000
			110,000
			110,000
			180,000
			90,000
	4.2 Surveillance and EWS are institutionalized and sustainably operated at national and sub-national levels	Output 4.2.1 – Results-based monitoring and reporting system for climate-sensitive surveillance institutionalized and aligned with national accountability frameworks <i>National climate-health surveillance M&E framework with standardised indicators and regular reporting cycle aligned with MoH accountability structures; digital M&E dashboard developed and operational.</i> Output 4.2.2 – Climate-resilient vaccine delivery and cold-chain systems strengthened to ensure continuity of essential immunization services during climate-related disruptions <i>Cold-chain vulnerability assessment across priority facilities from the 80 PHC centres and 6 hospitals; solar-powered refrigeration procured for highest-risk sites; 1 climate-resilient cold-chain contingency protocol endorsed by MoH EPI programme.</i>	<u>220,000</u>
			120,000
			100,000
5. Enhance workforce preparedness and operational readiness	5.1. A Multisectoral and multidisciplinary workforce is equipped with the skills and	Output 5.1.1 – Core climate–health competencies for multisectoral and multidisciplinary workforce defined and institutionalized <i>National climate-health competency framework developed through a participatory process involving MoH, NCDC, NCAH, and universities; formally adopted by MoH and integrated into pre-service and in-service training systems. Deliverables: 1 endorsed framework; revised in-service training syllabus.</i>	<u>440,507</u>
			120,000

capacity to climate-related health risks	competences to prevent, detect and respond to climate-related health risks	Output 5.1.2 – Training modules on climate-sensitive health risks and adaptation developed and delivered to national and sub-national health workforce <i>Climate-health training modules developed and delivered to national and sub-national health workforce, contributing to the project-wide target of 1,500 trained human, animal health, and environmental professionals concentrated in the high-risk areas of Derna, Benghazi, Tripoli, Sirte, Sabha, Kufra and Murzuq.</i>	80,507
		Output 5.1.3 – Primary healthcare workers trained and supported to detect, report and respond to climate-sensitive diseases <i>PHC workers trained across 80 priority centres through a cascade model; trained staff serve a combined catchment population of 800,000 people (80 × 10,000) in climate-exposed areas.</i>	120,000
		Output 5.1.4 – All-hazard and One Health rapid response teams trained and equipped for climate-sensitive health emergencies <i>Multisectoral rapid response teams trained and equipped for climate-sensitive health emergencies. Training operationally linked to the AHPPRP trigger thresholds (Output 2.1.5) and EWS protocols (Output 4.1.6), and to the One Health MoU coordination platform.</i>	120,000
	5.2 Sustained institutional capacity is established at national and subnational levels to deliver climate-health training, preparedness and operational readiness programmes.	Output 5.2.1 – Climate-health training curricula institutionalized within national and subnational training systems (MoH, NCDC, NCAH, municipal training units) <i>Climate-health training curricula formally embedded within MoH, NCDC, NCAH, and municipal training systems; trainer-of-trainers model established to sustain delivery beyond the project lifecycle.</i>	<u>200,000</u>
			80,000
		Output 5.2.2 – Inclusive knowledge-transfer and institutional readiness mechanisms established and operational at national and subnational levels, supported by UNDP <i>National and sub-national knowledge-transfer mechanisms operational, supported by UNDP; includes a climate-health knowledge repository and peer-learning network connecting institutions across Libya's 25 governorates.</i>	120,000
6. Project/Programme Execution cost			437,788
7. Total Project/Programme Cost			4,608,295,
8. Project/Programme Cycle Management Fee charged by the Implementing Entity (if applicable)			391,705
Amount of Financing Requested			5,000,000

Theory of Change



Libya's health system currently operates in a state of chronic reactive crisis. Despite foundational surveillance and facility infrastructure, the 2018 Joint External Evaluation (JEE) confirmed critical structural gaps: Libya scored only 1 out of 5 for an interoperable, interconnected, electronic real-time reporting system; 2 for syndromic surveillance; 2 for event-based surveillance; 2 for multi-hazard public health emergency preparedness and response planning; and 2 for emergency response operations. Across the facility network, significant proportions of hospitals and PHC centres remain non-functional, with major disparities in service readiness, staffing, and supply access - particularly in remote and conflict-affected areas. These weaknesses are not static. They are being systematically worsened by a rapidly intensifying climate-hazard profile: projected temperature increases of 2–3°C by mid-century, more frequent flash floods of the severity that destroyed Derna in 2023, expanding vector habitats driving transmission of malaria, dengue, and leishmaniasis, prolonged droughts compounding water scarcity, and increasing sand and dust storm frequency generating respiratory and cardiovascular burdens. Libya's health system currently has no adaptive capacity to interrupt this chain. It lacks the evidence base to anticipate climate-driven health threats, the infrastructure to withstand them, the surveillance architecture to detect their health consequences early enough to act, and a trained workforce capable of responding in a coordinated, multisectoral manner. The result is a structural trap: climate hazards escalate into health emergencies precisely because each link in the adaptation chain is broken. Women, children, persons with disabilities, internally displaced persons, migrants, and remote and poor households bear the greatest burden - they are the most exposed and face the highest barriers to care when the system fails.

This project is designed to break that chain at four interlocking points.

IF Libya generates a robust, nationally owned climate-health evidence base - through vulnerability and adaptation assessments across all 25 governorates, multi-hazard risk mapping, a WHO Health National Adaptation Plan aligned National Health Adaptation Plan developed through multi-stakeholder consultation and formally endorsed by government, climate risk integration into health sector planning cycles, and operationalisation of the November 2024 One Health Memorandum of Understanding signed by the Ministry of Health, Ministry of Environment, Ministry of Agriculture, and Ministry of Local Governance - creating the institutional foundation and actionable intelligence that currently does not exist -

AND IF the 80 PHC centres and 6 hospitals most exposed to flooding, extreme heat, water scarcity, and power disruption are upgraded to Emergency-Ready PHC standards and equipped with solar energy systems and climate-resilient WASH infrastructure - ensuring that facilities serving a combined catchment population of 1,071,500 people continue to deliver essential services precisely when climate shocks make those services most critically needed -

AND IF disease surveillance and early warning systems are upgraded to detect and respond to climate-sensitive diseases - malaria, dengue, leishmaniasis, cholera, and acute diarrhoea - through interoperable digital platforms linking human, animal, and environmental health data streams, operationalisation of EIOS at NCDC, integration of climate-relevant indicators into routine surveillance, and expansion of community-based surveillance in high-risk areas, with interoperability linkages to existing platforms including Libya Mozn -

AND IF 1,500 human health, animal health, and environmental professionals concentrated in the highest-risk areas - Derna, Benghazi, Tripoli, Sirte, Sabha, Kufra, and Murzuq - are trained and embedded within institutionalised cascade training systems that will continue to deliver climate-health competencies beyond the project lifecycle -

THEN Libya's health system will undergo a structural transition from reactive crisis management to anticipatory, climate-resilient service delivery: facilities will remain functional during climate shocks rather than failing at the moment of greatest need; surveillance systems will generate actionable early warning before climate-driven outbreaks escalate into uncontrolled emergencies; preparedness plans will trigger coordinated, pre-positioned responses rather than improvised reactions; and a climate-competent multisectoral workforce will be capable of protecting the most vulnerable 1,071,500 people served by targeted facilities -

BECAUSE the five components of this project are not parallel interventions but a single integrated adaptation system in which each component removes a specific bottleneck that would otherwise allow climate hazards to escalate unchecked: evidence and planning tools are only actionable if the health facilities that must act on them are functional enough to do so; climate-resilient facilities are only protective if surveillance systems detect threats early enough to prepare; surveillance is only effective if a trained workforce can interpret signals and activate a coordinated response; and all of these gains are only sustained if they are institutionalised through nationally endorsed policies - the NHAP, the All-Hazards Prevention, Preparedness and Response Plan, the PHEM policy, and the One Health coordination platform - that embed climate resilience permanently into Libya's health system architecture and deliver measurable progress toward Libya's draft NDC target of 50% climate-resilient health facilities and national early warning coverage by 2035.

Projected Calendar:

Indicate the dates of the following milestones for the proposed project/programme

Milestones	Expected Dates
Start of Project/Programme Implementation	Jan 2027
Mid-term Review (if planned)	Jul 2028
Project/Programme Closing	Dec 2029
Terminal Evaluation	September 2030

PART II: PROJECT / PROGRAMME JUSTIFICATION

- A. Describe the project/programme components, particularly focusing on the concrete adaptation activities of the project, and how these activities contribute to climate resilience. For the case of a programme, show how the combination of individual projects will contribute to the overall increase in resilience.**

Overarching climate hazard–exposure–impact chain: Libya’s climate risk profile is driven by escalating hazards—extreme heat, erratic rainfall, storm surges, sand and dust storms, and prolonged drought—whose frequency and severity are increasing. These hazards disproportionately affect coastal cities (Tripoli, Derna, Benghazi), peri-urban wadis, and fragile southern regions such as Fezzan and Kufra, where high exposure intersects with systemic vulnerabilities, including overstretched health facilities, degraded water systems, limited early warning capacity, and dependence on climate-sensitive livelihoods. This convergence amplifies climate–health impacts, including vector-borne disease expansion, waterborne outbreaks, respiratory illness, infrastructure damage, and disruption of essential services. In response, the project targets critical points where climate risks most affect service continuity, applying a One Health approach to reduce exposure, address structural gaps, and strengthen system-wide resilience.

Alignment with Libya’s NDC Adaptation Priorities: The project aligns with Libya’s NDC (2025), which prioritizes “public health and heat resilience,” including targets for climate-resilient health facilities and expanded heat-alert coverage. It operationalizes regionally differentiated adaptation by focusing on high-risk coastal, peri-urban, and southern regions, and strengthening surveillance, early warning, and service continuity. However, gaps remain in intersectoral coordination, diagnostics, and climate-integrated surveillance, compounded by the absence of a comprehensive Health Vulnerability and Adaptation assessment.

Adaptation additionality: While Libya’s health system faces structural constraints, climate change introduces intensified hazards—heat, flooding, sand and dust storms, and shifting disease patterns—that exceed system capacity. These risks increase outbreaks of leishmaniasis, Rift Valley Fever, and waterborne diseases, disrupt services, and compromise facility functionality. The proposed interventions—climate-resilient WASH and energy systems, climate-informed surveillance, and One Health preparedness—represent essential additional investments to maintain service continuity and protect vulnerable populations beyond business-as-usual approaches.

Localization of climate risks and justification of priority areas: Climate risks vary geographically. Coastal areas face flooding and erosion, central regions face water instability and vector risks, and southern regions face extreme heat, sand and dust storms, and chronic service gaps. The project prioritizes high-exposure, low-capacity areas to maximize adaptation impact.

Coordination mechanisms: A Project Steering Committee led by the Ministry of Health and Ministry of Environment will provide strategic oversight. NCDC and NCAH will coordinate technically, municipalities will oversee local implementation, and WHO and UNDP will jointly implement through a unified workplan, monitoring framework, and clear coordination arrangements.

Institutionalization of capacity-building: Training on climate–health surveillance, resilient facility management, and One Health coordination will be standardized and embedded within MoH and NCDC/NCAH systems, with integration into academic institutions. The One Health MoU will support sustained multisectoral coordination and long-term institutional capacity.

Integration into national and municipal budgeting systems: The project will support integration of recurrent O&M costs for solar, WASH, and surveillance systems into national and municipal budgets. High-risk municipalities will include climate–health service continuity in local plans, ensuring predictable financing and alignment with NDC and NAP priorities.

Private sector engagement and long-term operation and maintenance: Private firms will support delivery and maintenance of solar, WASH, and digital systems through performance-based contracts. The project will strengthen local capacity for oversight, promote quality-assured procurement, and create employment opportunities, including for youth and women. Long-term sustainability will rely on public financing and structured service contracts, transitioning from project to domestic funding.

Final beneficiaries and equitable benefit distribution: The project prioritizes groups most affected by climate risks, including urban poor in flood-prone coastal areas, pastoralist communities, IDPs, migrants, women and girls, and persons with disabilities. Equitable benefit distribution will be ensured through geographic targeting, inclusive service design, and engagement with local authorities and civil society. Investments will apply vulnerability-based selection criteria, with outcomes tracked through sex-, age-, and disability-disaggregated indicators. Targeted outreach and inclusive communication will ensure access for populations facing mobility, language, and social barriers, ensuring adaptation benefits reach those with the highest vulnerability and lowest adaptive capacity.

Beneficiaries groups and specific benefits:

Women and young girls: They will benefit from gender-responsive preparedness and response measures, including improved referral continuity, more reliable maternal and primary health services, inclusive risk communication, and workforce training integrating gender and protection considerations. Outreach will specifically target women and girls facing mobility, safety, or social barriers.

Youth and children: They will benefit from improved continuity of primary health care and essential services during climate shocks, including immunization, nutrition, and child health services. Strengthened surveillance and early warning will enable earlier detection of climate-sensitive risks such as water-, food-, and vector-borne diseases.

PWD: Persons with disabilities will benefit from more accessible and inclusive service delivery through facility upgrades, disability-sensitive planning, inclusive risk communication, and improved WASH environments, ensuring continuity of care during climate-related disruptions.

Pastoralists and agro-pastoral communities: They will benefit from improved early warning of climate-sensitive risks—including drought, water scarcity, food insecurity, and zoonotic threats—through strengthened surveillance, One Health coordination, and enhanced outreach and communication in remote areas.

IDPs/Migrants/Refugees: They will benefit from more inclusive surveillance, preparedness, and service continuity, with improved access to functioning health services in climate-exposed areas through targeted facility resilience investments and inclusion in referral and preparedness planning.

The selection of intervention targets is based on Libya's climate-risk profiling and the concentration of vulnerability in coastal and southern regions, including Derna, Benghazi, Tripoli, Sirte, Sabha, Kufra, and Murzuq. These areas face recurrent flooding, heatwaves, water scarcity, and disease risks. The project will prioritize 80 primary health care centers and 6 hospitals for climate-resilient upgrades, solar energy systems, strengthened WASH infrastructure, and Emergency-Ready PHC approaches.

Workforce capacity-building will target approximately 1,500 professionals across human, animal, and environmental health sectors, focusing on high-risk municipal areas. This targeted approach ensures that resources are directed where climate hazards most threaten service continuity and public health outcomes, maximizing efficiency, equity, and adaptation impact.

WHO estimates that each Primary Health Care Centre and each Hospital have on average a catchment population of 10,000 people and 45,000 people respectively. Moreover, the proposed programme aims to train 1500 people.

Therefore, in total the programme will target $1,071,500$ direct beneficiaries $(80 \times 10,000) + (6 \times 45,000) + 1,500 = 1,071,500$.

Linking climate projections to the adaptation intervention mix: Projected temperature increases of 2–3°C and more frequent heatwaves threaten health facility functionality, increase energy demand, and elevate heat-related illness, justifying solar energy systems and climate-resilient WASH to ensure service continuity. Intensified rainfall and flood events increase risks of waterborne outbreaks and infrastructure damage, supporting climate-informed surveillance, early warning, and all-hazards preparedness. Rising sand and dust storms increase respiratory burden and AMR risks, reinforcing the need for workforce training, IPC strengthening, and One Health surveillance. Shifts in vector ecology further justify integrated monitoring and rapid response to zoonotic and vector-borne diseases. Each intervention directly responds to projected climate risks, translating climate projections into targeted adaptation measures.

Vulnerable groups identified in the climate-risk assessment—women, girls, persons with disabilities, IDPs, migrants, and remote communities—will be systematically integrated into all components. This includes inclusive design for WASH and energy systems, accessible early warning communication, prioritization of high-risk populations in facility selection, and embedding gender- and disability-responsive approaches across training and surveillance.

Based on these priorities, the project is structured around four reinforcing components addressing key climate–health vulnerabilities.

Alignment with NDC pathway and results logic: The sequencing in this Theory of Change mirrors Libya's NDC long-term adaptation framework, which outlines a staged pathway from (i) institutional and data foundations (2025–2030), to (ii) accelerated sectoral adaptation in water, food and health systems (2030–2040), and (iii) full mainstreaming of climate resilience across

national development planning (2040–2050+). The TOC components - climate intelligence, surveillance strengthening, climate-resilient facility upgrades, and workforce readiness – correspond directly to the NDC’s priority system “Public Health and Heat Resilience”, which targets 50% climate-resilient health facilities and national early-warning coverage by 2035. By ensuring that each component contributes to these NDC outcomes, the project delivers measurable progress toward Libya’s nationally defined adaptation goals.

WHO will lead overall coordination and health-related technical components, including climate-sensitive surveillance, early warning, and preparedness capacities, as well as technical oversight of WASH upgrades in health facilities. UNDP will lead infrastructure components, including solar energy systems and environmental WASH interventions.

Beyond infrastructure, UNDP, in collaboration with WHO, will support institutional capacity-building, particularly at municipal level, and strengthen multisectoral coordination through the One Health framework while ensuring compliance with Environmental and Social Safeguards. It will also work with the Ministry of Finance to support sustainability of key systems—surveillance, response, and facility maintenance—beyond the project lifecycle.

Operation and Maintenance (O&M) Arrangements

Solar energy systems. O&M responsibility will be anchored at facility level, with trained managers conducting routine checks and basic maintenance, supported by municipal health directorates for oversight and asset tracking. At national level, the Ministry of Health will oversee the solar asset portfolio, including replacement cycles and major repairs. Standardized O&M protocols, service agreements with local technicians, and remote performance monitoring will be established during implementation. Recurrent costs (estimated at 1–2% annually) will be integrated into facility and MoH budgets to ensure sustainability beyond the project.

Climate-resilient WASH systems. Facility-level WASH maintenance will be managed by trained focal points responsible for routine inspections, water quality monitoring, and minor repairs, with municipal sanitation units providing technical support and audits. The NCDC will oversee water quality reporting. Recurrent costs will be integrated into facility budgets, and service agreements with water providers formalized to ensure continuity.

One Health surveillance platform and interoperable digital systems. The surveillance platform will be hosted by NCDC and integrated with existing national systems (IDSR and animal health reporting) to avoid parallel structures. Dedicated IT focal points will manage system operations, with hosting secured through national infrastructure and cloud backups. Recurrent costs will be planned and progressively absorbed into national budgets, with WHO providing limited post-project technical support.

e-PHEM / PHEOC digital systems. The e-PHEM system will be managed by the MoH PHEOC, with trained staff assuming full responsibility. Licensing and maintenance costs will be incorporated into MoH budgets, supported by a final sustainability and exit strategy outlining O&M roles, costs, and commitments for all project assets.

WHO will lead technical coordination, including development of the National Health Adaptation Plan and integration of climate-sensitive priorities into surveillance and service delivery. UNDP and WHO will jointly support stakeholder engagement, intersectoral coordination, and long-term institutionalization of climate-resilient health systems.

Component 1. - Strengthen the evidence base to predict and mitigate health impacts of climate change

Component 1 establishes Libya's climate–health intelligence system by generating decision-ready evidence on climate hazards, vulnerabilities, and service risks. It provides the analytical foundation for all subsequent interventions by enabling climate-informed planning, policy development, and investment prioritization.

Climate hazard–vulnerability–impact linkage: Libya faces intensifying hazards—extreme heat, floods, sand and dust storms, coastal inundation, and drought—which interact with weak surveillance, degraded infrastructure, and limited early warning capacity. This leads to delayed outbreak detection, increased disease burden, and repeated service disruptions. Strengthening the evidence base enables anticipatory action and risk-informed decision-making.

Outcome 1.1: Climate–health risk information is routinely generated, disseminated, and used for decision-making.

- **Output 1.1.1:** National V&A, multi-hazard, and infrastructure risk assessments completed, identifying priority hazards, populations, and facilities.
- **Output 1.1.2:** Climate–health adaptation strategies and planning tools developed, aligned with NAP/NDC processes.
- **Output 1.1.3:** Technical capacity strengthened to monitor climate variability and interpret projections.
- **Output 1.1.4:** Evidence products (maps, briefs, reports) disseminated in accessible formats to decision-makers and communities.

Component 2. - Enhance health system climate resilience through policy integration and multisectoral collaboration

Component 2 strengthens institutional capacity to integrate climate risks into health governance, policies, and emergency systems. It supports the development of the National Health Adaptation Plan (NHAP), modernizes public health emergency frameworks, and operationalizes One Health coordination across sectors.

Climate hazard–vulnerability–impact linkage: Climate hazards are increasingly disrupting health systems, yet policies and preparedness frameworks remain insufficiently climate-informed. Strengthening governance and multisectoral coordination reduces institutional vulnerability and enables coherent responses to climate-sensitive risks.

Outcome 2.1: Climate change is integrated into national and sub-national health policies and planning.

- **Output 2.1.1:** NHAP developed, translating risk assessments into prioritized adaptation actions, implementation roadmap, and monitoring framework.
- **Output 2.1.2:** Stakeholder mapping and institutional analysis conducted to identify coordination gaps.
- **Output 2.1.3:** Policy briefs, dialogues, and advocacy activities implemented to mainstream climate–health priorities.
- **Output 2.1.4:** Institutional capacity strengthened for climate-informed planning, budgeting, and surveillance.
- **Output 2.1.5:** Climate-informed All-Hazards Prevention, Preparedness and Response Plan developed.
- **Output 2.1.6:** PHEM policy updated to integrate One Health and climate risks.
- **Output 2.1.7:** PHEOC strengthened with SOPs and digital systems (e-PHEM) for coordinated response.

Outcome 2.2: A functional One Health coordination mechanism strengthens multisectoral collaboration.

- **Output 2.2.1:** National One Health platform operationalized.

- **Output 2.2.2:** Regular One Health Task Force meetings institutionalized.
- **Output 2.2.3:** Mechanisms for integrated multisectoral planning and policy development strengthened.

Component 3. - Improve the resilience and sustainability of healthcare facilities in the face of climate change

Component 3 enhances facility-level resilience to ensure uninterrupted service delivery during climate shocks. It integrates climate-resilient infrastructure, operational readiness systems, and workforce competencies.

Climate hazard–vulnerability–impact linkage: Health facilities face repeated disruptions from heatwaves, floods, water scarcity, and disease surges, compromising energy supply, WASH systems, cold chains, and service continuity. Strengthening facility resilience directly reduces vulnerability and protects populations in high-risk areas.

Outcome 3.1: Facilities deliver uninterrupted, climate-resilient services.

- **Output 3.1.1:** Emergency-Ready PHC (ERPHC) and hospital resilience models piloted in high-risk areas.
- **Output 3.1.2:** Workforce capacities strengthened for climate-sensitive disease management, IPC, ORI, and protection-sensitive care.
- **Output 3.1.3:** Facility performance and mentorship systems institutionalized.
- **Output 3.1.4:** Surveillance, reporting, and referral linkages strengthened.
- **Output 3.1.5:** Solar energy systems installed to ensure reliable power and cold-chain continuity.
- **Output 3.1.6:** Climate-resilient WASH systems upgraded to maintain safe water and sanitation under climate stress.

Component 4. - Strengthen disease surveillance and early warning systems for climate-related health risks

Component 4 builds an integrated surveillance and early warning ecosystem linking climate data with disease intelligence to enable timely detection and response.

Climate hazard–vulnerability–impact linkage: Climate change increases risks of vector-borne, waterborne, and respiratory diseases, while fragmented surveillance systems delay detection and response. Strengthening surveillance and early warning reduces outbreak risk and enables anticipatory action.

Outcome 4.1: Surveillance and early warning systems detect and respond to climate-related risks in a timely manner.

- **Output 4.1.1:** Climate-informed surveillance systems assessed and strengthened.
- **Output 4.1.2:** Routine surveillance adapted to include climate-relevant indicators under One Health.
- **Output 4.1.3:** Event-based surveillance strengthened for rapid detection.
- **Output 4.1.4:** Community-based surveillance expanded with inclusive participation.
- **Output 4.1.5:** Integrated One Health digital platform developed for real-time data sharing.
- **Output 4.1.6:** Surveillance SOPs, plans, and simulation exercises institutionalized.

Outcome 4.2: Surveillance systems are institutionalized and sustainably operated.

- **Output 4.2.1:** Results-based monitoring aligned with national accountability systems.
- **Output 4.2.2:** Climate-resilient vaccine delivery and cold-chain systems strengthened.

Component 5. - Enhance workforce preparedness and operational readiness capacity to climate-related health risks

Component 5 develops a climate-ready workforce capable of responding to increasingly complex climate-related health risks across sectors.

Climate hazard–vulnerability–impact linkage: Climate change increases demand on health, veterinary, and environmental personnel, while current capacities are insufficient for climate-sensitive response. Strengthening workforce skills and coordination reduces response delays and improves service continuity.

Outcome 5.1: A multisectoral workforce is equipped to prevent, detect, and respond to climate-related risks.

- **Output 5.1.1:** Core climate–health competencies defined and institutionalized.
- **Output 5.1.2:** Training modules developed and delivered across sectors.
- **Output 5.1.3:** PHC workers trained in surveillance, case management, IPC, and referral systems.
- **Output 5.1.4:** Rapid response teams trained and equipped for climate-sensitive emergencies.

Outcome 5.2: Sustained institutional capacity for training and preparedness is established.

- **Output 5.2.1:** Climate–health curricula integrated into national and sub-national training systems.
- **Output 5.2.2:** Inclusive knowledge-transfer and institutional readiness mechanisms operationalized.

This structured, multi-component approach ensures that Libya’s health system transitions from reactive crisis response to proactive, climate-resilient service delivery, with strengthened evidence, governance, infrastructure, surveillance, and workforce capacity aligned to national adaptation priorities.

Implementation arrangements

Initial mapping of roles and responsibilities of executing entities

The project will be jointly implemented by the World Health Organization (WHO), acting as the Implementing Entity and technical Executing Entity, and the United Nations Development Programme (UNDP), acting as an Executing Entity. Roles are defined based on comparative advantage to ensure technical quality, operational efficiency, and sustainability.

WHO will provide overall implementation oversight and lead all health-sector technical components, ensuring alignment with national priorities and the One Health framework. Its responsibilities include:

- Component 1: Leading climate–health V&A assessments, multi-hazard risk analysis, and infrastructure diagnostics, ensuring methodological rigor and integration with national systems.
- Component 2: Leading development of the National Health Adaptation Plan, climate-informed preparedness frameworks, and PHEM policy alignment; strengthening PHEOC operations and coordinating One Health integration.
- Component 4: Leading climate-sensitive surveillance and early warning systems, including EBS, CBS, and interoperable One Health platforms.
- Component 5: Leading workforce development, including competency frameworks, training systems, and rapid response preparedness.

WHO will also oversee technical reporting and ensure coherence across all components.

UNDP will focus on infrastructure delivery, governance strengthening, and sustainability:

- Component 2: Supporting operationalization of the One Health coordination platform and

integration of climate–health priorities into national systems.

- Component 3: Leading implementation of solar energy and climate-resilient WASH systems in health facilities, including procurement, installation, and O&M arrangements.
- Component 4: Supporting results-based monitoring systems for surveillance and early warning, ensuring alignment with national accountability and budgeting frameworks.

UNDP will also support subnational capacity-building, sustainability planning, and integration of investments into national systems.

Coordination and complementarity: WHO and UNDP will coordinate through a unified workplan, shared results framework, and joint steering mechanisms led by the Ministry of Health. Clear division of roles, formalized TORs, and information-sharing protocols will ensure complementarity between WHO's technical leadership and UNDP's infrastructure and systems-strengthening role.

B. Describe how the project/programme provides economic, social and environmental benefits, with particular reference to the most vulnerable communities, and vulnerable groups within communities, including gender considerations. Describe how the project/programme will avoid or mitigate negative impacts, in compliance with the Environmental and Social Policy and Gender Policy of the Adaptation Fund.

The project is designed to deliver significant economic, social, and environmental benefits while ensuring full compliance with the Adaptation Fund's Environmental and Social Policy (ESP) and Gender Policy, with a strong focus on vulnerable populations.

Economic benefits include reduced healthcare costs through strengthened climate-resilient health systems and surveillance, ensuring service continuity and minimizing disruptions. Investments in solar energy and resilient infrastructure will support local green economies, while capacity-building will enhance workforce skills and create opportunities in climate-resilient sectors.

Social benefits include improved health outcomes through reduced morbidity and mortality from climate-sensitive diseases and strengthened access to essential and mental health services. Community resilience will be enhanced through inclusive engagement, preparedness planning, and improved risk communication. Gender equality is central: women will be actively engaged in planning and implementation, supported by gender-sensitive training and improved WASH infrastructure. The project prioritizes vulnerable groups—including IDPs, migrants, refugees, children, the elderly, and remote populations—ensuring inclusive access and contributing to social cohesion.

Environmental benefits include reduced carbon emissions through solar energy systems, improved water efficiency and waste management through upgraded WASH infrastructure, and strengthened integration of climate considerations into health policies, contributing to broader environmental sustainability.

Avoiding and mitigating negative impacts: The project will comply with ESP and Gender Policy through an Environmental and Social Impact Assessment (ESIA) and Environmental and Social Management Plan (ESMP), ensuring all activities undergo screening and mitigation. Inclusive approaches will minimize social risks and address structural inequalities affecting women, persons with disabilities, and displaced populations. WASH upgrades will improve safety, privacy, accessibility, and menstrual hygiene management, while ensuring continuity of maternal and reproductive health services during climate shocks.

A Gender Action Plan will be developed at full proposal stage, supported by participatory gender

analysis, with indicators disaggregated by sex, age, and disability. Capacity-building on safeguards and continuous monitoring will ensure compliance and adaptive management.

By integrating these measures, the project maximizes benefits while effectively managing risks, contributing to a sustainable, inclusive, and climate-resilient health system in Libya.

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

The proposed project is highly cost-effective, delivering substantial health and climate adaptation benefits within a US\$ 5 million budget by focusing on a limited set of high-impact functions: generating climate–health evidence, translating it into policy and planning, strengthening service continuity in high-risk facilities, enhancing climate-informed surveillance and early warning, and building workforce preparedness.

Budget allocation is strategically distributed across components: evidence and planning (US\$ 440,000), policy integration (US\$620,000) and One Health governance (US\$ 240,000), climate-resilient infrastructure (US\$ 1,350,000), surveillance and early warning (US\$ 660,000), surveillance (USD\$220,000), workforce preparedness (US\$ 440,507) and institutional capacity building (US\$200,000) with the remainder covering management and implementation costs. This sequencing prioritizes institutional and evidence foundations before scaling operational investments, ensuring that higher-cost infrastructure and digital systems generate sustainable results.

Cost-effectiveness is reinforced through several factors. The project leverages existing national institutions (MoH, NCDC, NCAH, Ministry of Environment and Local Government), avoiding parallel structures and reducing coordination costs, while benefiting from UNDP's established procurement systems for efficient infrastructure delivery. A preventive approach—focused on resilience, surveillance, and early warning—reduces the need for costly emergency responses. Targeted investments in 80 primary health care centres and 6 hospitals, combined with system-level strengthening and training of 1,500 professionals, ensure depth and sustainability of impact rather than fragmented coverage.

The One Health approach further improves efficiency by integrating human, animal, and environmental health systems, reducing duplication and maximizing resource use. Capacity-building is designed for sustainability through a trainer-of-trainers cascade model, institutionalizing skills within national systems and reducing long-term costs.

Significant avoided costs strengthen the project's value for money. Preventing outbreaks of climate-sensitive diseases such as malaria, dengue, leishmaniasis, and cholera reduces the need for expensive emergency responses and infrastructure recovery. The 2023 Storm Daniel disaster, which caused an estimated US\$ 1.7 billion in losses, illustrates the scale of costs associated with inadequate resilience. By contrast, this project delivers adaptation benefits to approximately 1,071,500 people at a cost of about US\$ 4.67 per beneficiary, demonstrating high efficiency compared to reactive response models.

Overall, the project combines targeted facility-level investments with system-wide strengthening to deliver cost-effective, scalable, and sustainable climate adaptation outcomes. A detailed cost-benefit analysis, including avoided cost modelling, will be undertaken during full proposal development.

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

The proposed project is fully aligned with Libya's NDC (2025) and its long-term adaptation vision to build a climate-resilient society capable of safeguarding lives, livelihoods, and ecosystems. It directly responds to identified climate risks—including extreme heat, floods, salinization, aquifer depletion, and sand and dust storms—by targeting high-exposure and low-capacity regions across coastal, peri-urban, and southern zones, in line with the NDC's Climate-Related Risk Regions framework. The project operationalizes the NDC priority on “public health and heat resilience,” contributing to national targets of achieving 50% climate-resilient health facilities, expanding heat-alert coverage beyond 80%, and integrating health into national early warning systems. It delivers these outcomes through climate-resilient WASH and energy upgrades, climate-sensitive surveillance, One Health preparedness, and strengthened workforce capacity. It is also aligned with Libya's institutional adaptation architecture, complementing platforms such as the National Adaptation Intelligence and Coordination Platform (NAICP) and the Climate Risk Intelligence and Decision Support System (CIDSS). By strengthening climate-sensitive health data systems and decision-making, the project supports national monitoring, reporting, and transparency commitments under the Enhanced Transparency Framework. Equity and inclusion—central principles of the NDC—are embedded throughout the project, with targeted investments in vulnerable populations, including women, youth, IDPs, migrants, and rural communities. Gender-responsive and disability-inclusive approaches are integrated into service delivery, workforce development, and beneficiary selection, contributing to the NDC's objective of inclusive and resilient development. The project also delivers mitigation co-benefits by expanding renewable energy use in health facilities and improving water and energy efficiency in WASH systems, consistent with the NDC's WEFE nexus approach. It further supports priority areas of the National Adaptation Plan, including health, surveillance, early warning, and climate-resilient service delivery. Beyond climate policy alignment, the project is consistent with Libya's national development priorities. It supports health system strengthening and Universal Health Coverage efforts, aligns with the One Health MoU for multisectoral coordination, reinforces the National AMR Action Plan through integrated human-animal-environment interventions, and contributes to the National Food Security Strategy through improved food safety systems. Finally, the project contributes to Libya's international commitments under the UNFCCC and Paris Agreement, as well as key SDGs, including SDG 3 (Health), SDG 6 (Water and Sanitation), SDG 2 (Food Security), and SDG 13 (Climate Action). It will maintain alignment with evolving national policies through continuous engagement with relevant authorities, ensuring integration into broader development frameworks and long-term sustainability.

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

The project will ensure full compliance with relevant national technical standards in Libya and strictly adhere to the Environmental and Social Policy (ESP) of the Adaptation Fund. Given the current context in Libya, where some national standards may be in development or inconsistently applied due to ongoing instability, the project will adopt a pragmatic approach:

Adherence to available national standards: Where national technical standards for environmental assessment, building codes, water quality, food safety, and healthcare infrastructure are established and enforceable, the project will fully comply with them. This includes working closely with relevant ministries and agencies to identify and apply the most up-to-date national guidelines.

Application of international best practices: In areas where national standards are nascent, absent, or inconsistently applied, the project will default to internationally recognized best practices and standards, particularly those promoted by WHO and other relevant international bodies. This will ensure the highest quality and safety standards for all project interventions.

Environmental and Social Impact Assessment (ESIA): A comprehensive ESIA will be conducted during the full proposal development phase, as mandated by the Adaptation Fund's ESP. This assessment will identify potential environmental and social risks associated with project activities (e.g., construction of water harvesting systems, waste management from health facilities) and develop detailed mitigation and management plans. The ESIA process will be participatory, involving affected communities and stakeholders.

All construction and rehabilitation works under the project will be guided by UNDP Social and Environmental Standards (SES) and implemented in line with internationally recognized building and safety codes. In particular, the International Building Code (IBC) will serve as the baseline framework for structural integrity, safety, and compliance of all facility-level interventions. This will be complemented by relevant International Electrotechnical Commission (IEC) standards to ensure the safe design, installation, and operation of solar photovoltaic systems and associated electrical infrastructure.

In addition, sector-specific guidance will be applied to ensure that interventions within health facilities are fit for purpose and aligned with global best practices. This includes adherence to World Health Organization (WHO) standards and guidance, notably: the WHO guidance on Climate-Resilient and Environmentally Sustainable Health Care Facilities, the WHO Water, Sanitation and Hygiene (WASH) in Health Care Facilities standards, the WHO Guidelines on Core Components of Infection Prevention and Control (IPC) Programmes, and WHO guidance on Safe Management of Wastes from Health-Care Activities (Blue Book). All solar photovoltaic systems will also comply with the technical standards and guidelines of the Renewable Energy Authority of Libya (REAOL), ensuring alignment with national regulatory requirements, grid integration protocols, and quality assurance frameworks for renewable energy installations. These standards will guide the design, operation, and upgrading of facilities to ensure resilience to climate risks, continuity of essential health services, safe water and sanitation provision, infection control, and environmentally sound waste management practices, while protecting both human health and surrounding ecosystems.

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

To avoid duplication and ensure complementarity, a thorough review of ongoing and planned climate change adaptation and health-related initiatives in Libya, funded by other sources, has been conducted. Based on available information, this project is designed to fill critical gaps and build upon existing efforts rather than duplicating them.

While several organizations and donors are providing humanitarian assistance and some development support in Libya, particularly in the health sector, direct funding for comprehensive climate change adaptation specifically targeting health resilience through a One Health approach remains limited. Existing efforts tend to be fragmented or focused on immediate humanitarian needs rather than long-term adaptive capacity building.

Complementarity with WHO's existing support: The WHO, as the Implementing Entity, is already providing country support on climate change and health (as evidenced by the [who_cch_country_support_april-2025.pdf](#) document). This project will directly leverage and scale up these existing efforts, integrating them into a more comprehensive and strategic framework. It will build on WHO's technical expertise and established relationships with national health authorities.

Building on One Health initiatives: The project will complement the recently launched initiative on the implementation of the One Health approach in Libya, rather than creating new or parallel efforts. It will build on and benefit from the established coordination mechanisms, ensuring coherence, synergy, and efficient use of resources.

Surveillance/EWS:

Corporate Funds 2026: ongoing WHO technical support on climate and health and environmental health in Libya, including country profiling and technical assistance to strengthen Disease intelligence through the first training of Training on the use of EIOS (Epidemic Intelligence using Open Source) - \$150,000

Gavi contribution 2024-2026: flexible contribution from Gavi to support integrated surveillance and operationalization of the One Health coordination. \$350,000

ECHO 2022-2023: supported early warning and alert support (EWARN-related emergency support). EUR 1 Million.

Facility Resilience:

Ongoing activities: UNICEF-supported solarization of PHC facilities — UNICEF reported solar panels for **30 primary health care centres** across Libya in 2024 to sustain healthcare services during power shortages. Publicly accessible sources reviewed do not provide the dedicated budget for this solar package

One Health

AICS 2024-2026: two-year WHO/ISS/Libya initiative focused on zoonotic and arboviral disease prevention and control through a One Health lens. \$650,000

EU 2023-2025: project aimed to laying down the foundations for the One Health approach in Libya. \$500,000

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

A strong learning and knowledge management component will ensure systematic capture and dissemination of lessons to inform future climate–health adaptation in Libya and beyond. Regular learning reviews and workshops will engage project stakeholders to reflect on progress, challenges, and cross-sectoral experiences under the One Health approach. Best practices and

case studies will document effective interventions, while key findings will be translated into policy briefs and technical reports to inform decision-making and resource allocation. Project results will also be shared through participation in national, regional, and international forums to promote knowledge exchange and broader uptake.

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

The project preparation process has involved an initial consultative phase to ensure that the proposed interventions are relevant, responsive to local needs, and aligned with national priorities. This process has been guided by the principles of inclusivity, transparency, and participation, with particular attention to vulnerable groups and gender considerations, in compliance with the Adaptation Fund's Environmental and Social Policy and Gender Policy.

Initial Consultative Process:

The project preparation process has included an initial consultative phase to ensure that proposed interventions are relevant, responsive to local needs, and aligned with national priorities. This process followed principles of inclusivity, transparency, and participation, with particular attention to vulnerable groups and gender considerations, in line with the Adaptation Fund's Environmental and Social Policy and Gender Policy.

Initial Consultative Process:

A multi-stakeholder consultation workshop titled *"Protecting Public Health from Climate Change and Pollution: The Role of the One Health Approach"* was jointly organized by WHO, UNDP, the Ministry of Health, and the Ministry of Environment in August 2025. The workshop provided a platform to identify priorities, challenges, and solutions for addressing climate-related health risks through a One Health approach, emphasizing the interconnectedness of human, animal, and environmental health.

Participants included representatives from key ministries, NCDC, NCAH, local authorities, academic institutions (e.g., University of Tripoli, Agricultural Research Center), healthcare providers, and international partners. Efforts were made to ensure inclusive participation of both women and men. Discussions focused on infrastructure resilience, governance and coordination, surveillance and early warning, and the implications of climate change on health, including lessons from recent crises such as the Derna floods.

A pre-workshop Climate Change and Health Vulnerability Assessment questionnaire informed discussions, highlighting key vulnerabilities, systemic barriers, and priority risks. Working group sessions enabled participants to define actionable priorities and reinforced the importance of coordinated, multisectoral responses under the One Health framework.

Stakeholder feedback and incorporation into project design:

Consultations identified four priority areas: (i) strengthening climate-sensitive surveillance and early warning; (ii) upgrading WASH and energy systems in climate-exposed health facilities; (iii) operationalizing One Health coordination mechanisms; and (iv) improving climate–health data for risk-informed planning. These priorities directly informed project design, including integrated surveillance systems, climate-resilient infrastructure investments, strengthened governance, and workforce readiness.

Facility prioritization will be guided by criteria including climate hazard exposure, service criticality, vulnerability of catchment populations (women, children, PWD, IDPs, migrants, rural

communities), and baseline infrastructure gaps. These criteria will be refined during full proposal development through participatory engagement with municipal authorities, communities, and civil society, supported by the project's Vulnerability and Adaptation assessment to ensure transparent and evidence-based decision-making.

Broader stakeholder engagement:

Consultations during concept development included key national stakeholders: the Ministry of Health, NCDC, NCAH, Ministry of Environment, Ministry of Local Governance, and civil society organizations. CSOs working on gender equality, disability inclusion, youth empowerment, and climate advocacy contributed insights on access barriers, local needs, and community engagement strategies.

Community-level perspectives—gathered through CSOs—highlighted key challenges, including limited access to health services during climate shocks, weak risk communication targeting vulnerable groups, increased protection risks (including GBV), and service gaps in remote and informal settlements. These insights informed the project's emphasis on inclusive service design, targeted geographic prioritization, and strengthened community engagement and risk communication.

Outstanding gaps and next steps:

While initial consultations ensured strong national ownership, further engagement is required at subnational and community levels. During full proposal development, the project will conduct structured consultations with municipal authorities, facility managers, and community representatives—including women, youth, persons with disabilities, migrants, and IDPs—to refine intervention design and beneficiary selection.

This expanded engagement will ensure that the final project design reflects local priorities, operational realities, and equitable benefit distribution, strengthening ownership, inclusivity, and long-term sustainability.

I. Provide justification for funding requested, focusing on the full cost of adaptation reasoning.

The requested funding of US\$ 5,000,000 represents the full cost of adaptation - the additional costs specifically required to make Libya's health system resilient to climate change, above and beyond what would occur under a no-project baseline scenario.

Libya's existing health challenges are significantly exacerbated by a rapidly intensifying climate-hazard profile: projected temperature increases of 2–3°C by mid-century, more frequent and severe flash floods of the severity that destroyed Derna in 2023, expanding vector habitats accelerating transmission of leishmaniasis, Rift Valley fever, malaria, cholera, and acute diarrhoeal diseases, prolonged droughts, and increasing sand and dust storm frequency generating respiratory and cardiovascular burdens. The 2018 JEE confirmed that Libya's health system is structurally unprepared to respond to these hazards: scoring 1/5 for interoperable real-time surveillance, 2/5 for event-based surveillance, 2/5 for syndromic surveillance, and 2/5 for multi-hazard emergency preparedness. Without this intervention, Libya's capacity to cope with climate-sensitive health risks would remain severely limited, with escalating health emergencies, increased morbidity and mortality, and compounding service disruptions.

Existing finance flows to Libya are oriented toward humanitarian response, basic service restoration, and short-term health system support. A review of active donor portfolios in Libya's health sector - including EU, ECHO, UNICEF, CERF, GAVI, and bilateral contributors - confirms that none includes a programme specifically designed to finance climate-proofing of health

infrastructure, climate-informed surveillance integration, or national climate-health adaptation planning at scale. Domestic fiscal space is severely constrained and highly sensitive to hydrocarbon revenue volatility - hydrocarbons comprised approximately 75% of government revenue between 2015 and 2022 - limiting the Government's ability to absorb the additional costs of climate-proofing health facilities, deploying climate-informed surveillance, and establishing early warning systems. The Adaptation Fund therefore fills a critical gap by financing climate-specific, forward-looking interventions that go beyond the scope and time horizons of existing humanitarian and development financing in Libya.

At component level, the full cost of adaptation is as follows:

Component 1 - Strengthen the evidence base to predict and mitigate health impacts of climate change (US\$ 440,000): Under the baseline, zero of Libya's 25 governorates have a documented climate-health risk profile, no multi-hazard risk mapping for health has been conducted, no climate-resilient infrastructure risk diagnostic has been performed across the hospital and PHC network, and zero climate-health evidence products have been disseminated to sub-national decision-makers. Component 1 finances Libya's first integrated suite of climate-health assessments - including the national V&A assessment, multi-hazard health risk assessment, and infrastructure risk diagnostic - as well as the technical capacity and dissemination systems to translate this evidence into decision-ready products for ministries, municipalities, and communities. WHO's existing country support covers technical assistance and advisory functions but does not extend to financing national-scale assessment exercises or geospatial risk mapping infrastructure. These are wholly additional adaptation costs with no counterpart in any existing financing stream.

Component 2 - Enhance health system climate resilience through policy integration and multisectoral collaboration (US\$ 860,000): Under the baseline, national health policies, preparedness plans, and regulatory frameworks remain largely non-climate-informed. No National Health Adaptation Plan exists. The All-Hazards Prevention, Preparedness and Response Plan does not incorporate climate-sensitive triggers or One Health coordination. The PHEM policy does not reflect interoperability requirements between human, animal, and environmental health surveillance systems. The November 2024 One Health MoU has been signed by MoH, Ministry of Environment, Ministry of Agriculture, and Ministry of Local Governance but is not yet operationalised into a functioning coordination platform. Component 2 finances the additional policy-integration and coordination work required to mainstream climate change into Libya's health governance architecture - the NHAP, the updated AHPPRP, the revised PHEM policy, and the operationalisation of the One Health coordination platform and Task Force. These policy instruments go entirely beyond the standard mandates and existing budgets of national institutions, and no donor programme currently funds their development.

Component 3 - Improve the resilience and sustainability of healthcare facilities in the face of climate change (US\$ 1,350,000): Under the baseline, as of the last available national assessment, 17% of hospitals and 20.1% of PHC centres were non-functional under normal conditions - a figure that worsens significantly during climate shocks. No Emergency-Ready PHC standard is applied. Cold-chain systems are vulnerable to climate-induced power disruptions. Component 3 covers the incremental costs of piloting the ERPHC model; installing solar PV systems with battery storage; upgrading climate-resilient WASH infrastructure; strengthening IPC, cold-chain resilience, and referral pathways; and institutionalising performance-improvement and mentorship systems across 80 PHC centres and 6 hospitals serving 1,071,500 people in the highest-risk areas. UNICEF's existing solarization programme has covered 30 PHC centres but

does not extend to the remaining priority facilities, does not include WASH upgrades, and does not apply climate-resilient design standards or ERPHC compliance frameworks. The remaining adaptation gap is what Component 3 finances.

Component 4 - Strengthen disease surveillance and early warning systems for climate-related health risks (US\$ 880,000): Under the baseline, Libya's surveillance systems are fragmented across human, animal, and environmental sectors and lack climate-relevant indicators, real-time data exchange, and interoperable platforms. JEE 2018 scores of 1/5 for interoperable real-time reporting, 2/5 for event-based surveillance, 2/5 for syndromic surveillance, and 2/5 for multi-hazard preparedness confirm the depth of this gap. EIOS has been introduced at NCDC through initial WHO technical support but is not yet fully operationalised and no community-based surveillance networks exist for climate-sensitive events in high-risk areas. Component 4 finances the integration of climate-relevant indicators and One Health data streams into surveillance architecture; operationalisation of EIOS and interoperable digital platforms; expansion of event-based and community-based surveillance; development of climate-sensitive SOPs and simulation exercises; and institutionalisation of results-based monitoring and cold-chain resilience. Existing WHO and ECHO-supported surveillance activities address acute emergency response and basic IDSR functions but do not cover climate-informed surveillance integration, interoperable One Health platforms, or community-based detection networks - the specific adaptation gaps this component closes.

Component 5 - Enhance workforce preparedness and operational readiness capacity to climate-related health risks (US\$ 440,507): Under the baseline, no national climate-health competency framework exists, no institutionalised training system addresses climate-sensitive disease management or One Health emergency coordination, and rapid-response teams are not equipped or trained for climate-triggered multi-hazard emergencies. Component 5 finances the additional costs of defining and institutionalising core climate-health competencies; developing and delivering climate-health training modules to 1,500 professionals concentrated in the highest-risk governorates; training and equipping all-hazard One Health rapid-response teams; and embedding climate-health curricula permanently within MoH, NCDC, NCAH, and municipal training systems. Existing WHO and partner training activities address acute emergency response but do not cover climate-health competency frameworks, institutionalised cascade delivery systems, or rapid-response team equipment for climate-triggered scenarios. These costs fall entirely outside existing training budgets and would not be incurred under routine public health workforce development.

Collectively, these five components represent the climate-induced additional costs over and above a business-as-usual health system investment trajectory. The Adaptation Fund financing is not supplementary to existing programmes - it is the enabling condition for these investments to occur. A detailed cost-benefit analysis, including avoided-cost modelling and comparison with business-as-usual scenarios, will be conducted during Full Proposal development

J. Describe how the sustainability of the project/programme outcomes has been taken into account when designing the project/programme.

The sustainability of project outcomes has been a central consideration in the design of this programme. The project aims to create lasting positive change by embedding climate resilience within national systems, strengthening local capacities, and fostering a culture of adaptation. Economic sustainability: Solar and water-efficiency investments reduce recurrent diesel, electricity and service-disruption costs, while prevention-oriented surveillance reduces the far higher costs of late outbreak response.

Environmental sustainability: Renewable energy substitutes for diesel, all works remain within existing facility footprints, and construction, healthcare and battery waste are managed through ESMP protocols and supplier take-back obligations.

Social sustainability: Community-based surveillance, inclusive risk communication and facility-level engagement sustain participation, with pathways for women, youth, persons with disabilities, IDPs and migrants.

Institutional sustainability: Policies, platforms and competencies are embedded within MoH, NCDC, One Health and municipal structures rather than parallel project units, as detailed below.

Financial sustainability: O&M costs will be estimated per facility and presented through MoH and municipal budget processes; a costed transition plan will define recurrent needs for digital systems, with warranties, supplier obligations and UNDP-supported O&M contracts bridging until national budget uptake. The programme will not establish parallel or project-dependent structures; instead, it will strengthen and institutionalize climate-health functions within Libya's existing governance, health, surveillance, emergency-management and training systems

Key strategies to ensure sustainability include:

- **Institutional strengthening and policy integration:** By integrating the National Health Adaptation Plan into existing national health strategies and strengthening the One Health collaboration framework, the project ensures that climate change adaptation becomes an institutionalized priority, rather than a standalone, project-dependent activity. This will ensure continued government ownership and support beyond the project's lifespan.
- **Capacity building:** The project places a strong emphasis on building the capacity of national and local stakeholders, including health professionals, government officials, and community leaders. This investment in human capital will create a pool of skilled individuals who can continue to lead and implement adaptation efforts long after the project concludes.
- **Sustainability of surveillance and early warning systems:** Surveillance activities will be integrated into existing national systems rather than implemented through a separate project platform. The Ministry of Health and NCDC will retain institutional ownership of public health surveillance, while animal health, environmental and meteorological institutions will manage their respective data streams through the One Health coordination mechanism. Climate indicators, alert thresholds, reporting tools and response procedures will be incorporated into existing indicator-based surveillance, event-based surveillance, EIOS, animal health surveillance and PHEOC/e-PHEM functions, with interoperability ensured with existing national platforms. Sustainability will be further supported through formally endorsed SOPs and data-sharing agreements, training-of-trainers, and a costed transition and handover plan covering system hosting, connectivity, maintenance, cybersecurity, technical support. These recurrent requirements will be progressively integrated into the workplans and budgets of the responsible national institutions to ensure continuity after project completion.
- **Community ownership and empowerment:** The community-based surveillance, community preparedness planning and inclusive risk communication, will be driven by community participation and ownership. This will ensure that these initiatives are tailored to local needs and are more likely to be maintained and sustained by the communities themselves.
- **Knowledge Management and Dissemination:** The knowledge management component will ensure that lessons learned, and best practices are systematically documented and shared, creating a valuable resource for future adaptation planning and implementation in Libya.

- **Strengthening surveillance and early warning systems:** The establishment of robust and integrated surveillance and early warning systems will provide a lasting legacy, enabling Libya to continue monitoring and responding to climate-sensitive health risks effectively.
- **Partnership and Collaboration:** The project will foster strong partnerships among government agencies, civil society, and communities. These collaborative relationships will provide a foundation for continued joint action on climate and health issues.

Component 1. Strengthen the Climate–Health Evidence Base

Institutional ownership of evidence: Climate-health vulnerability, multi-hazard and health facility assessments, risk maps and monitoring protocols will be validated, managed and routinely updated by the MoH, NCDC, Ministry of Environment and relevant national institutions, ensuring their integration into national and subnational planning processes.

Knowledge use and dissemination: Policy briefs, Arabic-language guidance, dashboards and annual climate-health reviews will support evidence-informed decision-making, advocacy and resource mobilization beyond the project period.

Component 2. Enhance Climate–Health Governance and Multisectoral Collaboration

Policy institutionalization: The Health National Adaptation Plan, climate-informed emergency preparedness plans and revised Public Health Emergency Management policy will be formally endorsed and embedded within national health planning and budgeting.

Sustainable One Health coordination: The November 2024 One Health MoU will be operationalized through an interministerial coordination platform, supported by an MoH/NCDC secretariat, endorsed terms of reference, annual workplans and institutionalized data-sharing mechanisms.

Emergency-management continuity: PHEOC and e-PHEM systems, including SOPs and activation thresholds, will be maintained by national institutions through regular simulations, routine training and dedicated operational budgets.

Component 3. Improve the Resilience of Healthcare Facilities

Operation and maintenance: Participating facilities will establish preventive maintenance systems, asset registers, trained technical staff and long-term maintenance arrangements for solar energy and WASH infrastructure.

Institutionalized facility readiness: Climate-resilient Emergency-Ready PHC standards, readiness checklists, mentorship and annual assessments will become part of routine MoH supervision.

Replication and financial sustainability: A standardized replication package documenting technical specifications, costs and lessons learned will facilitate national scale-up, while energy-efficient investments will reduce recurrent operating costs.

Component 4. Strengthen Surveillance and Early Warning Systems

National ownership and system integration: The MoH and NCDC will lead integrated public health surveillance, linking climate indicators with existing indicator-based surveillance, event-

based surveillance, EIOS, animal health surveillance and PHEOC/e-PHEM systems through institutionalized multisectoral collaboration.

Operational and workforce sustainability: A costed transition plan will incorporate recurrent costs into institutional budgets, while training-of-trainers, mentorship, endorsed SOPs, surveillance plans, data-sharing agreements and regular simulation exercises will ensure long-term technical and operational capacity.

Component 5. Enhance Workforce Preparedness and Operational Readiness

Institutionalized training and knowledge transfer: Climate-health competencies will be integrated into national pre-service and in-service training programmes, supported by a national pool of trainers, standardized curricula, mentorship and refresher training to sustain local expertise.

Sustained response capacity and national learning: One Health rapid response teams will be embedded within existing emergency systems and supported through institutional equipment management, while a national climate-health knowledge repository and peer-learning network will facilitate continuous exchange of experience and good practice across Libya.

Cross-cutting transition, scale-up and exit arrangements

Before project closure, a formal handover and sustainability assessment will confirm institutional mandates, trained personnel, ownership of assets and digital systems, operation and maintenance arrangements and recurrent financing. These measures will enable national institutions to maintain and progressively scale the project's policies, surveillance systems, infrastructure, coordination mechanisms and workforce capacities beyond Adaptation Fund financing.

Handover will be formalised through signed asset-transfer and hosting protocols with MoH, NCDC and municipal authorities, with facility-level O&M cost estimates submitted to national and municipal budget processes so that recurrent-cost responsibility is assigned before closure rather than assumed. Where budget uptake is delayed, interim arrangements established during implementation, including warranties, supplier take-back obligations and UNDP-supported O&M contracts, will bridge the transition. By focusing on these key sustainability elements, the project aims to create a virtuous cycle of adaptation, where strengthened capacities, improved knowledge, and institutionalized processes lead to ongoing and self-sustaining efforts to build climate resilience in Libya.

The project will use a phased demonstration, validation, institutionalization and scale-up approach. Interventions implemented in the initial target governorates, 80 PHC centres and six hospitals will be evaluated for feasibility and cost-effectiveness, and maintenance requirements. Standardized replication packages will be developed, including prioritization criteria, technical standards, SOPs, training materials, indicative costs and safeguards.

- K. Successful models for climate-resilient facilities, surveillance, workforce development and One Health coordination will be integrated into national plans, routine systems and training structures. Before project closure, a costed scale-up roadmap will identify priority locations, responsible institutions and potential financing through government budgets, municipalities, partners and climate-finance mechanisms. This will enable gradual expansion across additional facilities and governorates. **Provide an overview of the environmental and social impacts and risks identified as being relevant to the project/programme.**

AF ESP Risk Category: B

The project is classified as Category B under the Adaptation Fund's Environmental and Social Policy, reflecting small-scale, site-specific works—solar PV installation and climate-resilient WASH upgrades across 80 PHCs and 6 hospitals—implemented within existing facility footprints, with no land acquisition, displacement, or significant environmental impact. Risks are limited, localized, and manageable through standard mitigation measures. Category A is not applicable due to the absence of large-scale or irreversible impacts, while Category C is not appropriate as site-level risks (e.g., waste management, electrical safety, temporary service disruption) require management through an Environmental and Social Management Plan (ESMP).

Unidentified Sub-Projects (USPs)

At concept note stage, the 80 PHC centres and 6 hospitals to be prioritised for infrastructure upgrades have been identified at the level of geographic concentration and preliminary selection criteria (climate hazard exposure, service criticality, vulnerability of catchment population, and baseline resilience deficit). All priority facilities and the detailed scope of physical works - including solar PV installation, battery storage, and WASH upgrades - will be fully confirmed during Full Proposal development, following completion of the Component 1 V&A assessment and participatory facility prioritisation process. Since complete site identification and detailed works specifications will be available at Full Proposal stage, no activities under this project will be treated as Unidentified Sub-Projects (USPs). A site-specific Environmental and Social Management Plan (ESMP) will be prepared for each prioritised facility as part of the Full Proposal, documenting the E&S screening outcome, applicable mitigation measures, and monitoring arrangements for each site before works commence. The project-level grievance mechanism will be operational before any site-level works begin, accessible in multiple formats and languages to ensure reach to women, persons with disabilities, IDPs, and migrants.

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		Risk MEDIUM: Libya's regulatory framework for construction, electrical safety, water quality, and healthcare waste management is fragmented and inconsistently enforced across the East/West political divide. Four specific regulatory gaps are relevant to this project: (i) building and works approvals for healthcare facility modifications may not be consistently issued by competent national authorities in all target governorates; (ii) electrical safety and solar PV installation standards are not comprehensively codified in Libyan law, creating risk of substandard installation; (iii) water quality standards for healthcare settings exist under the mandate of MoH and the General Authority for Water Resources but are not consistently applied; and (iv) healthcare waste and wastewater management requirements under Law No. 15 of 2003 on Environmental Protection are not uniformly enforced. Mitigation: During Full Proposal preparation, all applicable national legal and regulatory frameworks will be identified and documented for each target governorate, in consultation with MoH, Ministry of Environment, and relevant municipal authorities. Where national standards are absent or not consistently applied, the following international reference standards will be adopted as binding project requirements: WHO Water, Sanitation and Hygiene in Health Care Facilities (2nd edition, 2019) for WASH installations; IEC 62446-1 for solar PV system commissioning and performance verification; WHO Safe Management of Wastes from Health-Care Activities (2014) for healthcare waste; and WHO/UNICEF core questions on drinking-water and sanitation for facility-level water quality monitoring. Compliance with applicable standards will be verified through UNDP's procurement specifications, works supervision, and commissioning inspections. The ESMP will include a compliance monitoring protocol with documented sign-off at each facility before handover.
Access and Equity	V	Risk MEDIUM: Libya's dual administrative structure - with the Government of National Unity (GNU) controlling western Libya and the Government of National Stability (GNS) controlling eastern Libya - creates a real risk that project benefits are distributed unequally across the political divide, with facilities in one region receiving preferential access to project support. Additionally, women, persons with disabilities, IDPs, migrants, and remote rural communities may be systematically underserved if facility selection criteria are not explicitly equity-weighted. The large IDP and migrant population - including approximately 139,305 IDPs and over 700,000 migrants as of 2024 - faces particular access barriers, including lack of legal status, language barriers, and discrimination in service access. Mitigation: Facility selection criteria explicitly include vulnerability of catchment population and accessibility for marginalised groups as weighted prioritisation criteria. The project will operate across both administrative regions, with WHO and UNDP's established working relationships with health authorities in both east and west Libya used to ensure equitable geographic distribution. All beneficiary-level monitoring indicators will be disaggregated by sex, age, disability status, displacement status, and geographic region. Outreach and communication activities will be designed to reach IDPs, migrants, and remote communities, including through partnerships with IOM, UNHCR, and local NGOs. Facility-level WASH upgrades will incorporate accessibility standards for persons with disabilities. The grievance mechanism will be accessible in Arabic and in formats appropriate for low-literacy and mobility-constrained populations.
Marginalized and		Risk HIGH: Women, girls, persons with disabilities, IDPs, migrants, refugees, children, elderly persons, and communities in remote southern governorates face compounded vulnerability to climate-health risks and may be unintentionally excluded from project benefits if not explicitly integrated into targeting, design, and monitoring frameworks. Specific risks include: exclusion of female patients and health workers from training and facility

Vulnerable Groups		upgrade decisions due to gender norms; inaccessible physical infrastructure for persons with disabilities; exclusion of IDPs and migrants from facility catchment registration systems; and remoteness barriers for communities in Kufra, Murzuq, and southern desert areas. Mitigation: Formal inclusion commitments embedded in project design: facility selection weighted toward catchment populations with high concentrations of vulnerable groups; all training programmes designed with gender-responsive and disability-inclusive methodologies; WASH and infrastructure upgrades to meet accessibility standards; community-based surveillance networks explicitly engage women, youth, and CSOs serving IDPs and migrants; all indicators disaggregated by sex, age, and disability; targeted outreach through local NGOs and community health networks; and a Gender Action Plan developed at Full Proposal stage with specific targets for women's participation in governance, training, and surveillance functions.
Human Rights		Risk HIGH: Libya's fragile governance context, ongoing armed conflict in some areas, and lack of formal legal status for IDPs and migrants create conditions in which human rights violations - including discrimination in service access, denial of care, and inadequate grievance access - may occur in the course of project implementation. Female patients and health workers face gender-based discrimination. Migrants and asylum-seekers lack legal protections that would enable them to access formal grievance mechanisms. Contractors engaged for physical works may not respect workers' rights in the absence of strong labour law enforcement. Mitigation: Human rights-based design principles applied across all components, consistent with WHO's and UNDP's human rights policies and Libya's obligations under international human rights instruments to which it is a party. Non-discrimination clauses included in all facility service delivery protocols supported by the project. Multi-format, multi-language grievance mechanism accessible to all beneficiaries regardless of legal status, with anonymous reporting options. Human rights clauses embedded in all implementing partner and contractor agreements. ESMP to include a human rights risk monitoring protocol. UNDP's Social and Environmental Standards (SES) and WHO's accountability mechanisms will provide additional oversight.
Gender Equality and Women's Empowerment		Risk HIGH: Gender-blind design in surveillance systems, training programmes, and facility upgrades could perpetuate or deepen existing gender inequalities. Specific risks include: male-dominated One Health Task Force governance excluding women's perspectives; training schedules and locations incompatible with women's mobility and safety constraints; WASH facilities that do not meet women's privacy, menstrual hygiene management, or safety needs; and surveillance data not disaggregated by sex, obscuring differential disease burdens. Mitigation: Gender analysis to be conducted at Full Proposal stage informing a Gender Action Plan with specific targets and indicators. One Health Task Force and facility governance structures to include minimum female participation thresholds. All WASH upgrades to include sex-segregated facilities, MHM-appropriate infrastructure, and safety-by-design features. Training delivery adapted to women's mobility and safety constraints. All surveillance and monitoring data mandatorily disaggregated by sex. Female health workers explicitly targeted in cascade training programmes. Women's organisations and female community representatives included in all consultation processes.
Core Labour Rights		Risk HIGH: Contractors engaged for solar PV and WASH installation works may not comply with Libyan Labour Law No. 12 of 2010 or international core labour standards (ILO conventions on forced labour, child labour, freedom of association, non-discrimination), particularly given weak labour law enforcement in Libya's fragile context. Occupational health and safety risks are present for construction workers installing rooftop solar systems and working with electrical equipment and plumbing. Mitigation: Mandatory OHS plans required from all contractors prior to works commencement, covering electrical safety, working at height, and hazardous material handling. Child labour (under 18) and forced labour explicitly prohibited in all contract documents. Freedom of association and non-discrimination clauses included. Regular contractor monitoring by UNDP project management team. Labour standards compliance included as a contract performance condition with right of termination for breach. Incident reporting included in project monitoring framework.

Indigenous Peoples	Risk level: MEDIUM Screening conclusion: The Amazigh people constitute a distinct indigenous group in Libya, numbering approximately 1 million people - approximately 16% of the national population (IWGIA, 2026. https://iwgia.org/en/libya/5955-iw-2026-libya.html). Amazigh communities are present in the Nafusah Mountains and western Libya, areas that fall within the project's geographic footprint - particularly in governorates targeted under Component 3 (facility resilience) and adjacent to the Tripoli corridor target areas. Tuareg communities are present in the Fezzan region including Murzuq, and Tebu communities in the southeastern desert including Kufra - both of which are in the project's southern target areas. These communities meet the AF's functional criteria for Indigenous Peoples: they hold distinct collective identities, self-identify as distinct groups, maintain customary attachment to ancestral territories, and have experienced documented marginalisation and restricted access to services including healthcare. The Indigenous Peoples principle therefore applies to this project and requires active management. Risks to Indigenous Peoples: The primary risks are: (i) exclusion of Amazigh, Tuareg, and Tebu communities from facility prioritisation decisions, resulting in their healthcare facilities not being selected for climate-resilient upgrades despite their documented marginalisation and restricted service access; (ii) failure to conduct engagement in Tamazight, Tuareg Tamasheq, or Tebu languages, resulting in communities being unable to meaningfully participate in consultation processes; (iii) project activities in proximity to ancestral territories proceeding without free, prior and informed consent; and (iv) training and surveillance programmes not reaching IP community health workers and community members due to linguistic and cultural barriers. How the project will respect FPIC through design and implementation: The project commits to respecting the principle of Free, Prior and Informed Consent (FPIC) throughout the project cycle. During Full Proposal preparation, a dedicated IP engagement process will be conducted: (i) mapping of Amazigh, Tuareg, and Tebu community presence in all priority municipalities will be completed in consultation with IWGIA, UNHCR, IOM, and relevant civil society organisations; (ii) culturally appropriate consultations will be conducted with community representatives - prior to finalisation of facility selection and project design - in relevant languages including Tamazight where applicable; (iii) communities will be informed of the project scope, potential impacts, and benefits in accessible formats before any design decisions affecting them are finalised; and (iv) community consent will be documented before any works commence in areas where IP communities are present. FPIC will be an explicit requirement in the stakeholder engagement plan submitted with the Full Proposal. How IP are involved in the process: During implementation, Amazigh, Tuareg, and Tebu community representatives will be: (i) included in the facility prioritisation validation process under Component 1, ensuring that facilities serving IP communities are considered in selection criteria; (ii) engaged in Component 3 community preparedness planning processes, with culturally appropriate facilitation and Tamazight-language materials where applicable; (iii) included in community-based surveillance networks under Component 4 where IP communities are located in high-risk areas; and (iv) targeted in workforce training under Component 5, with particular attention to IP community health workers who serve as the primary healthcare interface for these communities. Benefit-sharing arrangements will be documented to ensure that IP communities in the project's geographic footprint receive equitable access to project investments. Mitigation measures: (i) Facility selection criteria will explicitly include proximity to and service of IP communities as a prioritisation factor; (ii) the ESMP will include a dedicated IP engagement protocol with FPIC documentation requirements; (iii) all community-level project materials will be produced in relevant languages including Tamazight; (iv) a culturally appropriate grievance mechanism will be established, accessible to IP communities through community representatives and in relevant languages; (v) IP community representatives will be included in the project's National Steering Committee or an advisory body reporting to it; and (vi) the Full Proposal ESMP will include a standalone Indigenous Peoples Plan (IPP) consistent with AF ESP requirements, documenting the outcomes of FPIC consultations, agreed benefit-sharing arrangements, and IP-specific monitoring indicators.
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Involuntary Resettlement	V	Risk LOW: Minimal: minor soil disturbance possible during installation of solar panel ground anchoring systems or external WASH pipework within facility perimeters. Mitigation: All physical works strictly confined to existing disturbed facility grounds. No works will extend beyond existing facility perimeters into undisturbed natural areas, water bodies, or ecologically sensitive zones. Solar panel installations will be primarily rooftop-mounted; where ground-mounted, confined within existing paved or disturbed areas. Disturbed soil to be restored post-installation. Confirmed: no interface with biodiversity-sensitive sites or protected areas.
Protection of Natural Habitats	V.	Risk LOW: None significant. All project activities occur within existing urban and peri-urban healthcare facility footprints with no disturbance of natural habitats, wildlife corridors, or biodiversity-sensitive areas. Mitigation: Compliance with applicable national environmental regulations. No activity outside existing disturbed areas. Waste management protocols to prevent contamination of surrounding environment.
Conservation of Biological Diversity	V	Risk LOW: Minor construction-phase emissions from contractor vehicles and logistics. No significant mitigation trade-offs anticipated. Mitigation: Project is fundamentally adaptation-focused. Solar energy installations will reduce facility dependence on diesel generators and grid electricity, generating mitigation co-benefits. Efficient construction practices encouraged in contractor specifications. Renewable energy systems prioritised throughout.
Climate Change		Risk HIGH: Three specific waste streams require active management: (i) construction and demolition waste from WASH upgrades and solar installations, including cement, piping, and metal components; (ii) end-of-life solar battery components - lithium-ion or lead-acid batteries contain hazardous materials (lead, acid, lithium) that pose soil and groundwater contamination risks if disposed of improperly; Libya does not have a comprehensive formal e-waste or hazardous battery disposal framework; and (iii) healthcare waste and wastewater generated during facility operations, which will increase slightly as facility functionality improves under the project. Mitigation: Facility-level waste management protocols developed for each target facility as part of ESMP. Construction waste segregation and disposal plan required from all contractors. Solar battery procurement specifications to include mandatory end-of-life take-back obligations from the supplier or manufacturer, consistent with extended producer responsibility principles, given Libya's limited hazardous waste disposal infrastructure. Healthcare waste managed in accordance with WHO Safe Management of Wastes from Health-Care Activities standards. Wastewater from WASH upgrades managed through existing facility drainage with upgrade to WHO standards where current systems are deficient. Resource use efficiency promoted through right-sized solar system design and water-efficient WASH fixtures.
Pollution Prevention and Resource Efficiency		Risk MEDIUM: Temporary disruption of health services during WASH and solar installation works, potentially affecting patient access to care during works periods. Mitigation: Project is fundamentally a public health strengthening intervention. Phased implementation schedule designed to avoid service downtime at any facility. Contractor scheduling required to work outside active clinical hours wherever possible. Continuity-of-care safeguards - including temporary service arrangements - to be documented for each site before works begin. Infection prevention and control (IPC) requirements for construction activities in clinical environments included in contractor specifications.

Public Health		Risk LOW: Extremely low probability of encountering heritage artifacts or culturally significant structures given that all works occur within existing modern healthcare facility boundaries. Mitigation: Chance-find procedure integrated in the ESMP as a precautionary measure. If any artifacts or structures of potential cultural significance are encountered during works, works will be suspended immediately and the relevant national heritage authority notified.
Physical and Cultural Heritage		Risk LOW: Minor soil disturbance from small-scale ground-anchoring of solar panels or external pipework within facility grounds. Mitigation: All installations strictly within existing facility grounds. No conversion of undisturbed land. Disturbed soil to be restored and stabilised post-installation. Ban on any activity that would cause erosion or surface runoff beyond facility perimeter.
Lands and Soil Conservation	V	Screening conclusion and basis LOW: Libya does not legally recognise any group as Indigenous Peoples under domestic law. The project's preliminary target areas - coastal governorates (Tripoli, Benghazi, Derna) and southern desert areas (Sabha, Kufra, Murzuq) - were assessed against the AF's four functional criteria for Indigenous Peoples: (i) distinct collective identity separate from dominant society; (ii) self-identification as a distinct group; (iii) customary attachment to ancestral territories; and (iv) experience of marginalisation or dispossession. Based on available country context, no community in the preliminary target areas has been identified as meeting all four criteria under the AF definition at this stage. However, distinct ethnic minority communities are present in parts of the project's potential geographic footprint: Amazigh communities in the Nafusah Mountains and western Libya (near Tripoli corridor); Tuareg communities in the Fezzan region including Murzuq and Ghat; and Tebu communities in the southeastern desert including Kufra. These communities have distinct cultural identities, traditional territorial relationships, and face documented marginalisation and restricted access to services. Whether they meet the full AF functional criteria will depend on site-specific conditions confirmed during Full Proposal development. Verification commitment: Once priority facilities and municipalities are confirmed through the Component 1 V&A assessment and participatory prioritization process, the Indigenous Peoples screening conclusion will be explicitly verified through: (i) desk review of community presence and characteristics in each priority municipality using UNHCR, IOM, and civil society sources; (ii) direct consultation with community representatives where any potentially affected distinct minority communities are identified; and (iii) legal and anthropological review of applicable AF criteria. If any Amazigh, Tuareg, Tebu, or other distinct minority communities are found to be present in priority areas, the ESMP and stakeholder engagement plan will include culturally appropriate engagement in relevant local languages or dialects, community representative involvement in site-level consultations, specific benefit-sharing arrangements, and grievance access mechanisms - consistent with AF ESP requirements and the principle of free, prior, and informed consent where applicable. This verification process and its outcomes will be fully documented in the Full Proposal ESMP.

PART III: IMPLEMENTATION ARRANGEMENTS

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

The project is fully aligned with the Results Framework of the Adaptation Fund, contributing to the Fund's overall goal of reducing vulnerability and increasing the resilience of human and natural systems to the impacts of climate change. The project's objectives and outcomes are directly linked to the Fund's outcomes and indicators, as outlined in the table below.

Each component is mapped to specific AF Outcomes (1, 2, 3, 4, 6 and 7), with corresponding Fund indicators. Component 1 contributes primarily to Outcome 7 (improved policies and regulations). Component 2 maps to Outcome 4 (increased adaptive capacity in health infrastructure). Component 3 aligns with Outcomes 3 and 6 (climate-risk monitoring and early-warning). Component 4 contributes to Outcomes 2 and 1 by strengthening the adaptive capacity of institutions and vulnerable populations. The alignment table below reflects this precise mapping.

Project Objectives	Project Objective Indicators	Fund Outcome	Fund Outcome Indicator	Grant Amount (USD)
Enhance health system climate resilience through policy integration and Multisectoral collaboration	% reduction in climate-related service disruption days in targeted health facilities. N of national and sub-national health institutions using climate-risk information and adaptation tools for planning and budgeting. % of priority climate-sensitive disease alerts detected and responded to within defined response time thresholds. N of people benefiting from strengthened climate-resilient health services in high-risk areas (<i>disaggregated by sex, age, disability</i>).	Outcome 1: Reduced exposure to climate-related hazards and threats	Indicator 1: People using improved climate-related threat and hazard information; [<i># of individuals, disaggregated by gender</i>] Indicator 1.2.2: People covered by new or improved early warning systems; [<i># of people, disaggregated by gender</i>]	5,000,000
		Outcome 2: Strengthened institutional capacity to reduce risks associated with climate-induced socioeconomic and environmental losses	Indicator 2: Institutions with strengthened capacity to understand and better address climate risks and resilience; [<i># of institutions, disaggregated by scale and sector</i>] Indicator 2.1.1: Institutions supported to strengthen capacity to understand and address climate risks and resilience [<i># of institutions, disaggregated by scale and sector</i>]	
		Outcome 4: Increased adaptive capacity within relevant development sector services and	Core Indicator 4: Physical assets improved or constructed to withstand climate variability and change [<i># of point infrastructure assets, disaggregated by sector</i>] Indicator 4.1.1: Development sector services strengthened to respond to	

Project Objectives	Project Objective Indicators	Fund Outcome	Fund Outcome Indicator	Grant Amount (USD)
		infrastructure assets	climate variability and change; <i>[# of sector services, disaggregated by sector and scale]</i> Indicator 7: Policies, strategies, and/or plans adopted, implemented, and/or enforced that integrate climate risk and resilience considerations; <i>[# of policies, strategies, and/or plans, disaggregated by scale and policy step]</i>	
		Outcome 7: Improved policies and regulations that promote and enforce resilience measures	Core Indicator 7.1.1: Policies, strategies, and/or plans developed or adjusted to integrate climate risk considerations; <i>[# of policies, strategies, and/or plans, disaggregated by scale]</i> Indicator 7.1.2: Policies, strategies, and/or plans formulated through the participation of one or more vulnerable groups; <i>[# of policies, strategies, and/or plans, disaggregated by scale]</i>	
Outcome 1.1 - Evidence-based climate and health risk information is regularly generated, disseminated and used for decision making	N of national and sub-national climate–health risk assessments completed and formally endorsed by government institutions N of ministries and sub-national authorities using climate–health risk information to inform planning, budgeting or policy decisions N of decision-makers with access to regularly updated climate–health evidence products (disaggregated by national/subnational level)	Output 1.1: Risk and vulnerability assessments conducted and updated	Indicator 1.1.1: Risk and vulnerability assessments conducted or updated; <i>[# of assessments, by sector and scale]</i>	440,000
		Output 2.1: Strengthened capacity of institutions to understand and better address climate risks	Indicator 2.1.1: Institutions supported to strengthen capacity to understand and address climate risks and resilience; <i>[# of institutions, disaggregated by scale and sector]</i>	
Outcome 2.1 - Climate change is systematically integrated into national and	N of national and sub-national health policies, strategies or plans developed or revised to integrate climate risk	Output 2.1: Strengthened capacity of institutions to understand and better	Indicator 2.1.1: Institutions supported to strengthen capacity to understand and address climate risks and resilience; <i>[# of institutions, disaggregated by scale and sector]</i>	620,000

Project Objectives	Project Objective Indicators	Fund Outcome	Fund Outcome Indicator	Grant Amount (USD)
sub-national health sector policies, planning frameworks and regulations	and resilience considerations National Health Adaptation Plan formally adopted and operationalized N of national institutions with mandates, SOPs or planning frameworks updated to address climate-sensitive health risks Public Health Emergency Management framework revised to integrate One Health and climate-related threats (yes/no, with scope)	address climate risks AF Output 7.1: Improved integration of climate-resilience strategies into country development plans	Core Indicator 7.1.1: Policies, strategies, and/or plans developed or adjusted to integrate climate risk considerations; <i>[# of policies, strategies, and/or plans, disaggregated by scale]</i> Indicator 7.1.2: Policies, strategies, and/or plans formulated through the participation of one or more vulnerable groups; <i>[# of policies, strategies, and/or plans, disaggregated by scale]</i>	
Outcome 2.2 - A functional One Health coordination mechanism strengthens multi-sectoral collaboration on climate sensitive health risks	One Health national coordination platform formally established and operational (yes/no) N of multisectoral institutions (human health, animal health, environment, agriculture, local government) actively participating in One Health coordination on climate-sensitive health risks N of joint multisectoral risk assessments, preparedness actions or coordinated responses initiated through the One Health mechanism Frequency of regular One Health Task Force meetings convened per year with documented decisions and follow-up actions	Output 2.1: Strengthened capacity of institutions to understand and better address climate risks	Indicator 2.1.1: Institutions supported to strengthen capacity to understand and address climate risks and resilience; <i>[# of institutions, disaggregated by scale and sector]</i>	240,000
		Output 3.3: Increased ownership of adaptation and climate risk reduction processes	Indicator 3.3.1: Number of local institutions and/or communities responsible for decision-making over how adaptation solutions are defined, prioritized, designed, and/or implemented; <i>[# of local institutions and/or communities]</i>	
Outcome 3.1 - Healthcare facilities deliver	N of healthcare facilities in high-risk areas delivering uninterrupted	Output 4.1: Vulnerable development	Indicator 4.1.1: Development sector services strengthened to respond to climate variability and change; <i>[# of</i>	1,350,000

Project Objectives	Project Objective Indicators	Fund Outcome	Fund Outcome Indicator	Grant Amount (USD)
uninterrupted, climate resilient and environmentally sustainable essential services	essential services during climate shocks (heatwaves, floods, power outages) N of health facilities meeting climate-resilient service standards (energy, WASH, IPC, cold chain) % reduction in climate-related service disruption days in supported facilities N of health facilities powered by climate-resilient energy systems and equipped with climate-resilient WASH infrastructure	sector services and infrastructure assets strengthened in response to climate change impacts, including variability	<i>sector services, disaggregated by sector and scale]</i> Core Indicator 4: Physical assets improved or constructed to withstand climate variability and change; <i>[# of point infrastructure, disaggregated by sector]</i>	
Outcome 4.1 - Climate-sensitive disease surveillance, early warning and response systems detect and respond to climate-related health risks in a timely manner	N of climate-sensitive diseases covered by climate-informed surveillance and early warning systems N of surveillance systems integrating climate-relevant indicators across human, animal and environmental health sectors Average time between detection and notification of climate-sensitive health events reduced in supported regions N of people covered by improved climate-sensitive early warning systems (<i>disaggregated by gender</i>)	Output 1.2: Targeted population groups covered by warning and advisory services for climate-related hazards and threats	Core Indicator 1.2.1: Early warning systems established or improved; <i>[# of systems, disaggregated by hazard and scale]</i> Indicator 1.2.2: People covered by new or improved early warning systems; <i>[# of people, disaggregated by gender]</i>	660,000
		Output 2.1: Strengthened capacity of institutions to understand and better address climate risks	Indicator 2.1.1: Institutions supported to strengthen capacity to understand and address climate risks and resilience; <i>[# of institutions, disaggregated by scale and sector]</i>	
Outcome 4.2 - Surveillance and EWS are institutionalized and sustainably operated at	Climate-sensitive disease surveillance and early warning systems formally integrated into national and sub-national	Output 2.1: Strengthened capacity of institutions to understand and better	Indicator 2.1.1: Institutions supported to strengthen capacity to understand and address climate risks and resilience; <i>[# of institutions, disaggregated by scale and sector]</i>	220,000

Project Objectives	Project Objective Indicators	Fund Outcome	Fund Outcome Indicator	Grant Amount (USD)
national and sub-national levels	institutional mandates and operating procedures N of national and sub-national institutions with dedicated budget lines or recurrent financing mechanisms for surveillance and EWS operations % of supported surveillance and EWS functions remaining fully operational 12 months after project completion N of health facilities and districts with climate-resilient vaccine delivery and cold-chain systems maintained during climate-related disruptions	address climate risks Output 4.1: Vulnerable development sector services and infrastructure assets strengthened in response to climate change impacts, including variability	Indicator 4.1.1: Development sector services strengthened to respond to climate variability and change; <i>[# of sector services, disaggregated by sector and scale]</i> Core Indicator 4: Physical assets improved or constructed to withstand climate variability and change; <i>[# of point infrastructure, disaggregated by sector]</i>	
Outcome 5.1 - A Multisectoral and multidisciplinary workforce is equipped with the skills and competences to prevent, detect and respond to climate-related health risks	N of multisectoral personnel (health, animal health, environment, municipal services) trained in climate-sensitive health risk prevention, detection, and response <i>(disaggregated by gender, sector, and level)</i> % of trained personnel demonstrating improved competencies in climate-sensitive surveillance, IPC, outbreak response, and One Health coordination N of operational rapid response teams meeting national standards for climate-sensitive health emergencies % of supported PHC facilities with trained staff capable of	Output 2.1: Strengthened capacity of institutions to understand and better address climate risks	Indicator 2.1.1: Institutions supported to strengthen capacity to understand and address climate risks and resilience; <i>[# of institutions, disaggregated by scale and sector]</i>	440,507
		Output 3.1: Targeted population groups participating in adaptation and risk reduction awareness activities	Indicator 3.1.1: People participating in activities to improve awareness of climate risks and how to address them; <i>[# of people, disaggregated by gender and by vulnerable groups]</i>	
		Output 3.3: Increased ownership of adaptation and climate risk reduction processes	Indicator 3.3.1: Number of local institutions and/or communities responsible for decision-making over how adaptation solutions are defined, prioritized, designed, and/or implemented; <i>[# of institutions or communities]</i>	

Project Objectives	Project Objective Indicators	Fund Outcome	Fund Outcome Indicator	Grant Amount (USD)
	detecting and reporting climate-sensitive diseases during climate shocks			
Outcome 5.2 - Sustained institutional capacity is established at national and subnational levels to deliver climate–health training, preparedness and operational readiness programmes	N of national and subnational institutions with climate–health training curricula formally institutionalized	Output 2.1: Strengthened capacity of institutions to understand and better address climate risks	Indicator 2.1.1: Institutions supported to strengthen capacity to understand and address climate risks and resilience; <i>[# of institutions, disaggregated by scale and sector]</i>	200,000
	N of climate–health training programmes delivered through government-owned systems beyond the project lifecycle	Output 3.2: Strengthened capacity of national and subnational stakeholders and entities to capture and disseminate knowledge and learning	Indicator 3.2.1: Climate resilience knowledge products and/or tools developed and shared with stakeholders; <i>[# of products/tools]</i>	
	N of trainers and mentors certified to deliver climate–health preparedness and operational readiness programmes <i>(disaggregated by gender and institution)</i>	Output 3.3: Increased ownership of adaptation and climate risk reduction processes	Indicator 3.3.1: Number of local institutions and/or communities responsible for decision-making over how adaptation solutions are defined, prioritized, designed, and/or implemented; <i>[# of local institutions and/or communities]</i>	
	N of subnational entities applying standardized climate–health preparedness and readiness protocols in routine operations			

A. Record of endorsement on behalf of the government²*Provide the*

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

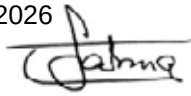
(Enter Name, Position, Ministry) Eng. Ahmed Abdulqader Alsoudani, Senior Officer, Ministry of Environment, Libya, Tel: + 218 9133 98 900, ahalarabi@environment.gov.ly	Date: (Month, day, year) February 9, 2026
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B. Implementing Entity certification *Provide the name and signature of the Implementing Entity Coordinator and the date of signature. Provide also the project/programme contact person's name, telephone number and email address*

I certify that this proposal has been prepared in accordance with guidelines provided by the Adaptation Fund Board, and prevailing National Development and Adaptation Plan and Nationally Determined Contributions on Climate Change Adaptation and subject to the approval by the Adaptation Fund Board, <u>commit to implementing the project/programme in compliance with the Environmental and Social Policy and the Gender Policy of the Adaptation Fund</u> and on the understanding that the Implementing Entity will be fully (legally and financially) responsible for the implementation of this

On behalf of Dr. Ahmed Zouiten, WHO Country Representative, Libya

Fatma Giha, OIC 30 July 2026



Implementing Entity Coordinator: VILLALOBOS Prats, Elena WHO Headquarters

villalobose@who.int

Date: (Month, Day, Year)

Tel. and email:

February 9, 2026

+218 91003080

zouitena@who.int

Project Contact Person: Cosima Zingariello

Tel. And Email: +216 99458603 zingariello@who.int

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

التاريخ: 14 هـ /
الموافق: 2026 / 2 / 8 م



الرقم الإشاري: 1658
رقم الملف:

ADAPTATION FUND

Letter of Endorsement by Government

08/02/2026

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

Subject: Endorsement for Strengthening Climate Change Adaptation and Health System Preparedness, Readiness and Resilience to Multi Hazard Risks and Climate Impacts.

In my capacity as designated authority for the Adaptation Fund in Libya, I confirm that the above national project concept note 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 Libya.

Accordingly, I am pleased to endorse the above project concept note with support from the Adaptation Fund. If approved, the project will be implemented by the World Health Organization (WHO) as the Multilateral Implementing Entity and executed by the United Nations Development Programme (UNDP), Ministry of Health, Ministry of Environment, Ministry of Agriculture, National Center for Disease Control, National Center for Animal Health, Ministry of Local Government, and Environmental Sanitation Affairs.

Sincerely,

Eng. Ahmed Abdulqader Alsoudani
Director of Geographic Information
Systems Department
Ministry of Environment Libya
Tel: + 218 91 339 8900
Email: ahalarabi@environment.gov.ly



Revised PFG Submission Form¹ (additions in red)

Project Formulation Grant (PFG)

Submission Date: 9 February 2026

Adaptation Fund Project ID:

Country/ies: Libya

Title of Project/Programme: Strengthen climate change adaptation and Health system preparedness, readiness and resilience to multi-hazard risks and climate impacts

Type of IE (NIE/RIE/MIE):

Implementing Entity: WHO Libya

Executing Entity/ies: UNDP Libya

A. Project Preparation Timeframe

Start date of PFG	Upon approval of the Concept Note
Completion date of PFG	6 months after Concept Note Approval

B. Proposed Project Preparation Activities (\$)

List of Proposed Project Preparation Activities	Output of the PFG Activities	US\$ Amount	Budget note²
Assessments	1. Knowledge attitude and Practice (KAP) studies will be conducted to provide baseline data, inform decision-making, tailor interventions, prioritize resource allocation, monitor and evaluate impact, and engage the community effectively.	70,000	USD 40,000 (consultant fees, data collection tools, field enumerators across 25 governorates, data analysis and report production). Baseline assessments: USD 30,000 (technical consultant fees, facility-level data collection across 80 PHC centres and 6 hospitals, report writing and validation workshop).

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

² The proposal should include a detailed budget with budget notes indicating the break- down of costs at the activity level. It should also include a budget on the **Implementing Entity management fee use**.

	2. Other baseline assessments will generate information that will inform refining of activities and setting targets		
Gender Analysis	Gender analysis will assess the following 1. Governance and Management: - Inclusion of women in governance structures at community level 2. Access to Resources and Services: - Addressing gender-specific barriers to healthcare access. - Addressing gender-specific barriers to resources including economic opportunities - Ensuring water and sanitation needs are met for women. 3. Impact of Climate Change on Health: - Conducting gender specific challenges. 4. Monitoring and Evaluation: - Ensuring gender-sensitive data collection and analysis. - Mainstreaming gender consideration in routine monitoring processes of relevant sectors.	20,000	USD 12,000. Stakeholder interviews and focus group discussions with women, female health workers, and CSOs: USD 5,000. Gender Action Plan development and validation: USD 3,000.
Workshops	- Stakeholders' consultation workshop for all line ministries - Stakeholders' consultation workshop targeting municipal authorities	10,000*3=30,000	Three workshops at USD 10,000 each, covering: venue hire, translation/interpretation (Arabic), participant travel and accommodation for

	- Stakeholder Consultations workshop targeting Community Members - Stakeholder Consultations workshop targeting women		participants from outside Tripoli, facilitation materials, and rapporteur services. Workshop 1: line ministries (Tripoli). Workshop 2: municipal authorities (regional location TBC). Workshop 3: community members including women and vulnerable groups (field location TBC).
Travel and participation	All costs related to travel and technical support incurred by the Implementing Entity (IE)	13,000	IE staff travel for field missions to priority governorates: USD 8,000 (flights, accommodation, per diem). Technical support missions for assessment oversight and stakeholder engagement: USD 5,000.
Design of the full project proposal	A comprehensive document, including the technical outcomes of assessment studies, will be developed and validated before submission to the Adaptation Fund (AF).	12,000	Full Proposal writing consultant: USD 8,000. Internal WHO review, editing, and formatting: USD 2,000. Validation workshop with key stakeholders prior to submission: USD 2,000.
Other Costs	Management Fee	5,000	IE management fee covering project coordination, financial reporting, compliance monitoring, and administrative support for PFG activities over the 6-month implementation period. Breakdown: project coordinator time (20%): USD 3,000; administrative and financial reporting: USD 2,000.

Total Project Formulation Grant		150,000	
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Please describe below each of the PFG activities and provide justifications for their need and for the amount of funding required:

Justification

1. Assessments (US\$ 70,000)

Description:

- **Knowledge, Attitude, and Practice (KAP) Studies:** These studies aim to gather baseline data on community perceptions, practices, and knowledge related to the project's thematic areas. This will ensure that project activities are evidence-based and tailored to address real, contextual needs. For example, understanding gaps in awareness or misconceptions can inform targeted educational campaigns.
- **Other Baseline Assessments:** These assessments will generate specific data in the targeted regions to assess the status of implementation against all programme strategies, and selected indicators to guide refinement of activities and setting of targets. Such assessments are critical to provide an objective reference for measuring progress and project impact over time. This data will also guide the prioritization of interventions to optimize resource allocation and increase efficiency. By anchoring project activities in robust data, these assessments enhance project accountability and contribute to achieving measurable, sustainable outcomes.

2. Gender Analysis (US\$ 20,000)

Description: This activity focuses on evaluating gender dynamics and inequalities across governance, resource access, and climate resilience. The review will focus on the following aspects;

- **Governance and Management:** Will assess the extent to which women participation is ensured in decision-making and policy formulation and leadership roles.
- **Access to Resources and Services:** Addressing gender-specific barriers to healthcare access and ensuring water and sanitation needs are met for women.
- **Impact of Climate Change on Health:** Gender-sensitive vulnerability is considered in various climate change related assessments. This will inform the development of equitable adaptation strategies.
- **Monitoring and Evaluation:** Ensuring gender-disaggregated data collection and the use of gender-specific indicators for progress tracking.

Justification:

- Gender analysis is essential to address structural inequalities that disproportionately affect women and other marginalized groups, ensuring that interventions do not inadvertently perpetuate discrimination.
- Evaluate gender-specific barriers and inequalities in accessing essential services, such as healthcare, education, water, and sanitation, while identifying opportunities for promoting equitable access for all.
- Incorporating gender-sensitive approaches strengthens the project's alignment with global commitments, such as the Sustainable Development Goals (SDGs), particularly SDG 5 (Gender Equality).

3. Workshops (US\$ 30,000)

Description: Stakeholder Consultation Workshops:

- Workshops for line ministries to ensure intersectoral collaboration and alignment with national priorities.
- Workshops with regional councils, Governors' offices, and local authorities to localize project interventions and gather on-the-ground insights.
- Community-level consultations to ensure that the voices and concerns of local populations are integrated into project planning.

Justification:

- Stakeholder engagement promotes ownership, accountability, and sustainability of project outcomes. Engaging line ministries ensures that the project aligns with existing policies and avoids duplication of efforts.
- Regional and local consultations provide an opportunity to address specific challenges unique to different contexts, promoting tailored interventions.
- Community consultations help incorporate indigenous knowledge and practices, building trust and ensuring cultural relevance, which increases the likelihood of success and community buy-in.

4. Travel and Participation (US\$ 13,000)

Description: This budget covers travel expenses for the Implementing Entity (IE) staff to provide technical support, participate in stakeholder engagements, and oversee field activities.

Justification:

- Field visits are crucial to ground-truth data collected during assessments and ensure that proposed interventions are contextually appropriate.
- Travel for technical support ensures high-quality outputs, adherence to Adaptation Fund guidelines, and the effective facilitation of PFG activities.
- Direct engagement with stakeholders at various levels fosters collaboration and builds trust, which is vital for long-term project success.

5. Design of the Full Project Proposal (US\$ 12,000)

Description: A comprehensive project proposal will be developed, incorporating technical outcomes from assessments, stakeholder inputs, and validated recommendations.

Justification:

- A well-designed project proposal is essential to secure funding and effectively communicate the project's vision, objectives, and implementation strategy.
- By integrating assessment findings and stakeholder feedback, the proposal ensures alignment with community needs, national priorities, and donor requirements.
- Validation by stakeholders enhances credibility and commitment, ensuring that the proposal reflects a collective vision and has buy-in from all relevant parties.

6. Other Costs: Management Fee (US\$ 5,000)

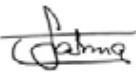
Description: This fee covers operational and administrative costs, including project coordination, reporting, and compliance with financial and administrative requirements.

Justification:

- Proper management and coordination are critical for the seamless execution of PFG activities.
- These costs ensure timely reporting, effective resource utilization, and compliance with donor requirements.
- By covering these essential operational needs, the project team can focus on delivering high quality outcomes without administrative disruptions

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
On behalf of: WHO Libya Country Representative, Dr. Ahmed Zouiten	Fatma Giha, OIC, 30 July 2026 	9 February 2026	Cosima Zingariello	+ 216 99458603	zingariello@who.int