



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 MALAWI



ADAPTATION FUND

**ADAPTATION FUND BOARD SECRETARIAT
TECHNICAL REVIEW OF PROJECT PROPOSAL FOR
"MALAWI ADAPTATION RESILIENCE FOR SUSTAINABLE AGRI-DEVELOPMENT"**

Project Title Malawi adaptation resilience for sustainable agri-development

Project ID AF00000574

Category Regular size project (over \$1 million)

Type Single country project

Stage Concept

Country Malawi

Implementing Entity UNIDO

Financing Requested USD 10,000,000.00

Reviewer Ahmad Ghosn

Co-reviewer(s)

IE Contact Person

Alvin Tepo Togba, Fatou Haidara, Fredrick Kongongo, Ganna Onysko, Heng Liu, Mark Grigoryan, Natale Guarnaccia, Olga Gordiievska

Secretariat's Overall Comment

The project “Malawi adaptation resilience for sustainable agri-development (MARESA)” aims to reduce the climate vulnerability of communities in the most exposed and resource-poor districts of Malawi.

The proposal includes a request for a project formulation grant of USD 150,000.

The initial technical review raises several issues, such as: revising components and financing table; indicating the EEs for components, providing more details and clarifying the USPs; reflecting the discussion on applicable standards/ regulations in a summary table; providing missing start and end dates for some listed projects; providing a summary table for the initial consultations; revising the AF RF alignment table; specifying the AF risk category of the project; justifying UNIDO’s involvement as EE and clarifying related costs; among other issues indicated in Clarification Requests (CRs), Corrective Action Requests (CARs) and notes raised in the review.

Country Eligibility

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

Response: Yes

Secretariat: Yes.

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

Response: Yes

Secretariat: Yes. Malawi is a developing country highly vulnerable to frequent droughts, destructive cyclones and floods, widespread food and water insecurity, etc. These CC effects devastate the nation's rain-fed farming systems and strain local communities depending on them.

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 10 February 2026.

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

Response: Not Cleared

Secretariat: Yes. However, please address the comments below.

CR1: Under “Project Objectives”, p. 9, please revise the introductory paragraph to reflect the overall objective statement “The overarching objective of the project is to reduce the climate vulnerability of communities in the most exposed and resource-poor districts of Malawi” as a standalone sentence/ statement, followed by the remaining text to explain how to achieve this objective.

CAR1: In the components and financing table please address the following:

1. Allocate amounts at outputs and component levels.
2. Move table number and heading to the top of the table. Apply for similar cases across the document.

Editorial notes:

1. In addition to the list of abbreviations please include lists of tables and figures, table of contents (will not count towards AF document length limit).
2. Spell out abbreviations when first used and refer to tables, figure, annexes at related discussions.
3. Conduct a round of editing/ proofreading for the document after revising it to address the review comment, to ensure quality and alignment with AF document length limit.

Response: Not Cleared

IE: CR1: Project Objectives (Part I)

Page 7. The introductory paragraph has been split. The overall objective now stands alone as a single statement: “The overarching objective of the project is to reduce the climate vulnerability of communities in the most exposed and resource-poor districts of Malawi.” A separate following paragraph explains how the objective will be achieved, through an integrated, locally owned and gender-responsive approach addressing the structural, biophysical, informational, financial and institutional barriers to adaptation.

CAR1.1: Allocation at output and component levels

Pages 8–9. The components and financing table (Table 1) has been rebuilt. Each component row lists its output-level allocations alongside the component total, and the Executing Entity is named in the first column.

Component totals: C1 USD 900,000; C2 USD 3,000,000; C3 USD 2,700,000; C4 USD 1,255,184; C5 USD 878,407.

Project costs USD 8,733,591; execution costs USD 482,999 (disaggregated by Executing Entity); total project cost USD 9, 216,590; IE fee USD 783,410; financing requested USD 10,000,000.

CAR1.2: Table numbering and heading placement

Throughout. All table numbers and headings are placed above their tables, and figure captions applied

consistently: Tables 1–8 on pp. 8, 9, 21, 27, 28, 29, 38 and 41; Table A2-1 on p. 46; Figures 1–2 on pp. 2 and 11.

Editorial notes 1–3

1. A Contents page (p. ii) and List of Tables and List of Figures (p. iii) have been inserted, in addition to the abbreviations list.
2. Page iv. The acronym list has been retitled List of Abbreviations and Acronyms and substantially expanded (from the original short list to 46 entries, including AF, AFB, CBA, DA, DCCMS, DoDMA, EE, EIA, ESIA, ESMF, ESMP, ESP, GAP, GCF, GRM, IE, MBS, MEAL, MSME, NFWCS, OHS, PDNA, SRF, ToC, USP and WEF). Abbreviations are spelt out at first use, and tables, figures and annexes are cross-referenced at the relevant points in the discussion.
3. The document has been edited and condensed throughout, and now runs to 49 numbered pages including annexes, within the AF 50-page limit (the Contents and lists do not count towards it). Space for the additional content requested by the review was created by tabulating Parts IID and IIE (pp. 27–28), condensing narrative in Parts IIB and IIH, deleting Part III B (per CR8), and moving the detailed consultation record to Annex III.

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. See Part IIA, p. 11-21. Concrete actions include, ecosystem restoration, adopting climate resilient interventions, establishment/ rehabilitation of irrigation and water systems, establishment/ rehabilitation of climate-proofed infrastructure and productive adaptation systems, among other related capacity building and learning/ knowledge supporting interventions. However, more details and some clarifications are needed as indicated below.

CR2: In a dedicated paragraph in Part I “after objectives” or in Part IIA after the theory of change, please indicate the AF objectives/ outcomes supported by the project (related information can be extracted from Part III AF RF alignment table).

CAR2: Please revise Part IIA to address the following:

1. Indicate the EE of the components, particularly those executed by UNIDO.
2. Provide more details on the activities and quantify related targets.
3. In Part IIA, indicate the USPs under each component, if any, and specify those that will be fully defined during full proposal stage and others that will be identified during implementation. For those to be identified during implementation, please clarify the measures to be taken to ensure their compliance with related AF requirements that can be access at: <https://www.adaptation-fund.org/document/guidance-document-for-project-programme-with-unidentified-sub-projects/>.

Response: Not Cleared

IE: CR2: AF objectives/outcomes supported

Page 8. A dedicated paragraph headed “Adaptation Fund alignment” has been added in Part I immediately after the project objectives (p. 7). It states that MARESA supports the Fund's strategic objectives to reduce vulnerability, increase adaptive capacity and strengthen awareness and ownership, and that under the July 2026 Strategic Results Framework guidance the project contributes to Fund Strategic Outcomes 1–7. It cross-refers to the detailed mapping in Table 8 (p. 41-43).

CAR2.1: Executing Entities identified

A subsection headed “Executing entity and indicative scale” has been added under each of Components 1–5 in Part IIA, pp. 11, 13, 15, 18 and 19 respectively, and the EE is shown in the first column of Table 1 (pp. 8–9). MoAIWD executes Components 1–2; UNIDO executes Components 3–5. The Executing Entities are also named on the Part I cover sheet (p. i). The Component 3 to 5 text (pp. 18–19) records that UNIDO will apply a functionally separate execution team and cost centre, distinct from its Implementing Entity oversight role.

CAR2.2: Activity detail and quantified targets

Pages 11–20. Indicative concept-stage targets are now quantified for every component, including: 7 district climate-risk and Water–Energy–Food nexus assessments; ≥ 35 community risk profiles, adaptation plans and committees; 7 early warning/advisory systems covering ≥ 150,000 people; ≥ 1,400 people trained; 30,000 households and ~6,000 ha under climate-resilient practices; 20 irrigation or rainwater-harvesting schemes serving ~1,000 ha; 3,000 ha restored; 14 nurseries producing ≥ 700,000 seedlings; 70 women- or youth-led enterprises; ≥ 14 climate-resilient facilities, 7 protection works and 21 decentralised renewable-energy systems; ≥ 20% reduction in post-harvest losses; 120 MSMEs/cooperatives (≥ 60% women- or youth-led); 35 community finance groups; ≥ USD 1 million additional finance; 300 jobs; 25 knowledge products; and 14 learning events. The text states that targets will be validated during full proposal preparation.

CAR2.3: Unidentified sub-projects (USPs)

Pages 12, 13, 15, 18 and 19. A “USP status” paragraph has been added under each component, classifying activities as fully defined at concept stage, partially unidentified and to be finalised at full proposal stage, or subject to residual site selection during implementation. Component 5 has no USPs.

Pages 39–40. The dedicated USP section in Part IIK confirms that no fully unidentified sub-project will be financed, and commits the project-level ESMP, to be prepared at full proposal stage, to establish an approved intervention menu; eligibility and exclusion criteria; climate-rationale and cost-effectiveness tests; gender and inclusion requirements; land, water, biodiversity, labour and community-safety screening; consultation and disclosure procedures; grievance access; institutional responsibilities; budget; and monitoring and reporting requirements. Before approval of any residual sub-project, UNIDO and the responsible EE will document risk identification against all 15 AF ESP principles, undertake commensurate impact assessment, finance mitigation measures, obtain national approvals and consult affected stakeholders using sex-disaggregated data. USP performance and safeguards compliance will be reported annually and assessed at mid-term and final evaluation, in line with the AF guidance document for projects/programmes with unidentified sub-projects.

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. See Part IIB, pp. 21-25. However, some quantification of the benefits is needed, among other issues noted below.

CR3: where possible please support the presented benefits with some quantification (e.g., activities targets, number of beneficiaries, dollar estimates and new jobs created where possible, etc.).

CR4: the second para under “Compliance with the Adaptation Fund Environmental and Social Policy”, p. 24, states “An Environmental and Social Management Framework (ESMF), Environmental and Social Impact Assessments (ESIAs), Environmental and Social Management Plans (ESMPs), and a Gender Action Plan will be

prepared and implemented in accordance with Adaptation Fund safeguard requirements and Malawi's national environmental regulations", please clarify when the above-mentioned instruments will be prepared/ developed (e.g.: during full proposal stage, etc.).

CR5: Please refer to the initial gender assessment (Annex II) as appropriate in Part B and other related sections.

Response: Not Cleared

IE: CR3: Quantification of benefits

Page 21. A new Table 3: Indicative Quantified Benefits and Targets has been added in Part IIB, organised by benefit area: people and inclusion (approximately 150,000–200,000 direct and indirect beneficiaries, at least 50% women, with youth and persons with disabilities reported separately); climate-informed planning and early warning; climate-resilient agriculture and water; ecosystems; infrastructure and energy; enterprises, jobs and finance (120 MSMEs/cooperatives, 300 jobs created or strengthened, ≥ USD 1 million additional finance mobilised or committed); and knowledge and institutions. The narrative (p. 20) was condensed accordingly and states that targets will be validated through baseline studies and consultations at full proposal stage.

CR4: Timing of safeguards instruments

Pages 23–24 (p. 24 of the reviewed version). The paragraph has been rewritten to specify timing explicitly. During full proposal preparation, UNIDO and MoAIWD will complete the ESMF, a project-level ESMP including procedures for partially unidentified sub-projects, the comprehensive gender assessment and Gender Action Plan, the Stakeholder Engagement Plan and the project Grievance Redress Mechanism. ESIA and site-specific ESMPs will also be prepared at full proposal stage for locations and designs known at that time. For any residual site or sub-project identified during implementation, screening and any required ESIA, ESMP, permits, consultations and gender-responsive measures will be completed, disclosed where required, and approved before tender, grant award, construction or other physical implementation. The instruments will be implemented, monitored and updated throughout the project lifecycle.

CR5: Cross-reference to the initial gender assessment

Annex II (p. 45) is now explicitly cross-referenced in the Part IIB introduction (p. 20), in the gender equality and social inclusion discussion (p. 22) and in the Component 2 targeting (p. 13, ≥ 50% of individual participants to be women). The Annex II introduction has itself been revised to record that the assessment informed component targeting, quantified benefit targets, the consultation approach, the safeguards timetable and monitoring provisions; its table is labelled Table A2-1 (p. 45). The gender findings are further corroborated by the district consultations now reported in Part IIB and Annex III (pp. 31–32 and 46–47), including women's water-collection time burden and constrained bargaining power under Machinga's matrilineal land system.

Is the project / programme cost effective?

Response: Cleared

Secretariat: Yes. See Part IIC, pp. 25-27. Sufficient for CN stage. A more detailed/ comprehensive cost effectiveness analysis will be needed at full proposal stage.

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. See Part IID, pp. 27-31. However, please address the below comment.

CR6: remove “Alignment with the” from the titles of the listed plans/ strategies and ensure that their dates are indicated next to their titles. Also, consider presenting the discussion in a tabulated form for more clarity and save space to meet AF document length limit after addressing the review comments. The table would include: plan title and date, focus/ objective, and the project interventions/ outputs relevant to the plan/ strategy.

Response: Not Cleared

IE: CR6:

Page 27. Part IID has been converted into Table 4: Consistency with National and Sub-National Strategies, with the three columns requested: plan/policy/strategy (with date), primary focus or objective, and the relevant MARESA interventions and outputs. The narrative is reduced to a short lead-in, which also saves space against the AF length limit.

The phrase “Alignment with the” has been removed from all instrument titles and dates are shown next to each title: Malawi 2063 (2020); National Adaptation Plan Framework (2020); Nationally Determined Contributions 3.0 (2021); National Climate Change Management Policy (2016); National Agriculture Policy (2016); National Energy Policy (2018); Revised National Water Policy (2023); National Framework for Water and Climate Services (2024); and the Disaster Risk Management Act (2023) with the National Disaster Risk Management Policy (2015).

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: Not fully addressed. See Part IIE, pp. 31-33. A summary table of the applicable standards is needed.

CAR3: Please revise the discussion in Part IIE to reflect the applicable standards/ regulations in a summary table. The table should include: the national technical standards (with dates), the project interventions/ activities they apply to, and the arrangements to ensure compliance. Applicable standards may include building codes, water quality regulations, environmental requirements, and any other sector-specific related regulations relevant to the project interventions.

Response: Not Cleared

IE: CAR3:

Page 27-28. Part IIE has been retitled “Applicable National Technical Standards and Compliance Arrangements” and the discussion replaced with Table 5, using the three columns requested: national requirement or standard (with date), the project interventions/activities it applies to, and the arrangements to ensure compliance. The table covers: Environment Management Act (2017) and national EIA Guidelines (1997); Water Resources Act (2013) and Revised National Water Policy (2023); Irrigation Act (2024) and MoAIWD irrigation design manuals; Malawi Standards MS 214:2013 and MS 733:2005 on water quality; National Construction Industry Act (1996), Malawi Construction Industry Act (2025), Malawi building standards and district building-control by-laws; Energy Regulation Act (2004 including as amended in 2025), Electricity Act (2004 including as amended in 2024), National Energy Policy (2018) and MBS electrical/solar standards; Occupational Safety, Health and Welfare Act (1997 including as amended in 2014; Land Act (2016) and Customary Land Act (2016); Forestry Act (1997, as amended in 2025); and the Local Government Act (1998 including as amended in 2010 and 2017) with district by-laws.

A lead-in paragraph (p. 27) confirms that the responsible technical authority will verify the current edition of every standard and any applicable district by-law for each selected site during full proposal preparation, and that compliance costs will be built into designs, procurement documents, contracts, supervision and operations plans.

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

Response: Not Cleared

Secretariat: Yes. See Part IIF, pp. 33-35. However, the start and end dates of some listed projects are missing.

CR7: Please provide the start and end dates for some listed projects (e.g.: Adapting to Climate Change Through Integrated Risk Management Strategies and Enhanced Market Opportunities for Resilient Food Security and Livelihoods – WFP / Adaptation Fund; FP238 – Ecosystems-based Adaptation for Resilient Watersheds and Communities (EbAM) – FAO/GCF; etc.).

Response: Not Cleared

IE: CR7

Start and end dates have been inserted for the projects flagged, in the table now numbered Table 6 (pp. 28–30):

- Adapting to Climate Change Through Integrated Risk Management Strategies... (WFP / Adaptation Fund), 11 June 2020 – 15 October 2025 (revised completion; USD 9.989 million).
- Smallholder Climate Resilience Project (IFAD / Adaptation Fund) approved 10 April 2026; implementation dates to be confirmed (USD 20 million).
- FP238 – Ecosystems-based Adaptation for Resilient Watersheds and Communities, EbAM (FAO / GCF), 18 July 2024 – 23 July 2030 (estimated completion).

A source note has been added below the table (p. 30) citing the Adaptation Fund and Green Climate Fund project records consulted (accessed August 2026) and confirming that coordination protocols and geographic overlap checks will be finalised during full proposal preparation. The section has been retitled “Duplication and Complementarity with Other Funding Sources”, and the project name corrected to “Malawi Adaptation Resilience for Sustainable Agri-Development” for consistency with the endorsed title.

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

Response: Cleared

Secretariat: Yes. Sufficient for CN stage. A dedicated component is included for the purpose (Component 5). Also, see Part IIG, pp. 35-36.

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: Unclear. See Part IIH, p. 36.

CAR4: Please provide a summary table for the initial 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.

Note: Keep current text on planned future consultations during full proposal (after the requested summary table of initial consultations conducted during the preparation of the CN).

Response: Not Cleared

IE: CAR4:

Field consultations have now been conducted, documented, and reconciled. District and community level consultations took place across all seven MARESA target districts between 24 and 31 August 2026, comprising 45 completed Key Informant Interviews (KIIs), and 17 Focus Group Discussions (FGDs) engaging 155 FGD participants, 200 stakeholders in total.

Pages 47–48. Annex III: Summary of Stakeholder Consultations by District presents the summary table requested, with the columns specified in CAR4: district; date; participants (M/F); key discussion topics; main issues and findings; and how reflected in the proposed project. A row is provided for each of Karonga, Chikwawa, Zomba, Machinga, Mangochi, Phalombe and Nsanje. Unlike the previous draft, FGD participants are now reported with an actual sex breakdown (e.g., Chikwawa's two mixed FGDs: 4M/6W and 3M/7W) rather than composition/type alone, closing the disaggregation gap the reviewer raised. KII participants also carry a full sex breakdown per district.

Pages 31–32. Part IIH has been rewritten to summarize the consultation scope, methodology and findings, consistent with the annex. As directed by the reviewer's note, the text on planned future consultations during full proposal preparation is retained immediately after the summary table discussion, covering the national concept-design consultation and the technical/safeguards/gender review still to come.

Page 32. A closing passage records how the findings shaped the design, mapping consultation outcomes to each of the four technical components: risk assessment, early-warning and gender-responsive planning needs to Component 1; soil fertility decline, deforestation and demand for drought-tolerant and irrigated agriculture to Component 2; infrastructure damage, water insecurity and requests for solar-powered irrigation and water systems to Component 3; and barriers to credit, donor-relief dependence and demand for women- and youth-led livelihood diversification to Component 4. The Annex III column "How Reflected in the Proposed Project" repeats this mapping at district level and links each district's findings to specific project Outcomes.

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

Response: Cleared

Secretariat: Yes. See Part II"l", pp. 37-40. sufficient for CN stage.

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

Response: Not Cleared

Secretariat: Yes. See Part IIIA, Table 5, pp. 45-46. However, few revisions are needed as noted below.

CAR5: Please address the following:

1. In the upper part of the table (AF outcome level) the first column title "Project Objectives" should be "Project

Outcomes" as per the updated guidance of July 2026.

2. In the lower part of the table (AF output level) the title of the first column "Project Outcomes" should be "Project Outputs" as per the new AF guidance of July 2026.

3. As per updated AF guidance of July 2026, please change the phrase "Total Fund Outcome Level Grant Amount" in upper part of the table (AF outcome level) to "Total outcome level grant amount", and the phrase "Total Outcome Grant Amount" at the bottom row (AF output level) to "Total output level grant amount".

4. Revise the layout of the information in columns 2, 3 and to ensure the alignment of AF indicators with related AF outcomes/outputs and related project indicators.

5. Move the Table 5 heading to the top of the table.

6. Please revise the alignment table to ensure compliance with the updated AF guidance of 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

CR8: No need to include Part B "Implementation Arrangement" at CN stage. Just indicate the executing entities (UNIDO and MoAIWD) in related components descriptions in Part IIA and delete the remaining text to save space for additional information requested by the review and maintain the document length within AF limits.

Response: Not Cleared

IE: CAR5.1 and CAR5.2: Column titles

Pages 41–43. In the upper (Fund outcome level) part of the table the first column is now titled "Project Outcomes" (p. 41), and in the lower (Fund output level) part it is now titled "Project Outputs" (pp. 41–42), in line with the July 2026 guidance.

CAR5.3: Total row wording

The rows now read "Total outcome level grant amount" (p. 41) and "Total output level grant amount" (p. 42). Both total USD 8,733,591, reconciling with Table 1 (pp. 8–9).

CAR5.4: Layout and alignment of indicators

The table has been restructured into five columns, Project Outcomes/Outputs; Project Outcome/Output Indicator(s); Fund Outcome/Output; Fund Outcome/Output Indicator; and Grant Amount, so that each project result sits on the same row as the Fund result and Fund indicator it contributes to, with its allocation. At output level the grant amount is now broken down to individual Fund Outputs (for example 150,000 to Output 7.1; 90,000 to Output 2.1; 360,000 to Output 1.2; 160,000 to Output 3.1), and the full AF indicator wording with its disaggregation requirements is reproduced in square brackets.

CAR5.5: Heading placement

The heading is placed above the table (p. 40) and the table renumbered from Table 5 to Table 8. The section is retitled "Alignment with the Adaptation Fund Strategic Results Framework".

CAR5.6: Compliance with the July 2026 guidance

The alignment has been remapped to the updated SRF templates. Outcomes are mapped to Fund Outcomes 1–7 with Core Indicator references; outputs are mapped to Fund Outputs 1.1, 1.2, 2.1, 2.2, 3.1, 3.2, 3.3, 4.1, 5.1, 6.1 and 7.1, citing the updated indicator numbering (including Core Indicators 2, 3 and 6).

CR8: Part III B

Part III B "Implementation Arrangement" has been deleted in full, including the SBAA paragraph. Part III now contains Part IIIA only (pp. 41–43). The Executing Entities (UNIDO and MoAIWD) are instead identified on the Part I cover sheet (p. i), in Table 1 (pp. 8–9) and in the component descriptions in Part IIA (pp. 11–20), as directed.

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

Response: Cleared

Secretariat: Yes. See Part III, pp. 40-41. Sufficient for CN stage.

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: Not Cleared

Secretariat: Yes. See Part IIK, pp. 41-44. However, the project overall risk category as per AF requirements is not indicated.

CAR6: In a dedicated paragraph, please clearly specify the AF risk category in which the E&S screening process has classified the project. (e.g.: Category A, B or C).

Response: Not Cleared

IE: CAR6:

Page 40. A dedicated paragraph has been added stating the Adaptation Fund risk category explicitly: Category B. The previous wording referring to a “Moderate Environmental and Social Risk Category” has been replaced with AF terminology.

The paragraph explains the basis for the classification, potential adverse impacts are expected to be site-specific, limited in scale, largely reversible and manageable through established mitigation measures, and identifies the risk sources considered: small-scale infrastructure, irrigation and water works, decentralised energy installations, ecosystem restoration, enterprise support, possible land-access issues, labour and community health-and-safety risks, and the use of partially unidentified sub-projects.

It further confirms that no Category A activity, involuntary resettlement or conversion of critical habitat will be eligible, and that the classification will be confirmed during full proposal preparation once site information, consultations and detailed screening are available. The preliminary screening against the 15 ESP principles is presented in Table 7 (pp. 38–40).

Resource Availability

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

Response: Cleared

Secretariat: Yes, Malawi has 10,010,665 USD available under the country cap.

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

Response: Cleared

Secretariat: Yes. The implementing entity fee (USD 783,410) is 8.5% of the total project/programme cost (USD 9,216,590). Same applies for the PFG.

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

Response: Not Cleared

Secretariat: Yes. Execution costs (USD 538,183) are at 5.84% of the total project/ programme cost (USD 9,216,590). However, some clarifications and verifications are needed.

CAR7: Please address the following:

1. Clarify if UNIDO's execution costs are calculated as per AF requirements. If the Implementing Entity serves as an executing entity, its execution costs should be limited to 1.5% of the cost of the part of the project executed by it.
2. Justification/ endorsement by the DA for the IE involvement as EE is required. The current DA letter of endorsement letter does not reflect this. Please either provide an updated endorsement letter to indicate UNIDO's involvement as EE or provide another separate letter in this respect.

Response: Not Cleared

IE: CAR7.1 — Calculation of UNIDO's execution costs

Page 8-9. Execution costs are disaggregated by Executing Entity in Table 1: MoAIWD USD 409,392 and UNIDO USD 73,607, totalling USD 483,999 (approx. 5.54% of the total project cost).

Page 9. A paragraph headed "Execution-cost compliance" immediately below Table 1 records that UNIDO executes Components 3, 4 and 5, valued at USD 4,833,591, and that its allocated execution cost of USD 73,607 is 1.5% of that amount, complying with the AF cap applicable where an Implementing Entity also serves as an Executing Entity. It commits to confirming the detailed execution-cost budget and the functional separation between UNIDO's implementing and executing roles, separate personnel responsibilities, cost centres, budgets, approvals and reporting lines, in the full proposal. The same separation is stated in the Component 4 and 5 descriptions (pp. 18–20).

CAR7.2:

Designated Authority endorsement of the IE as EE Annex I initially contained the original Designated Authority Endorsement letter dated 10 February 2026. This letter confirms UNIDO as Implementing Entity and MoAIWD as Executing Entity but does not address UNIDO's additional role as Executing Entity for Components 3, 4 and 5. Addressing CAR7.2 - specifically requiring an endorsement letter that mentions MoAIWD and UNIDO execution an updated endorsement letter (dated 4 September 2026) reflecting UNIDO's role as both IE and EE has been prepared and submitted in Annex I.

Eligibility of IE

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

Response: Cleared

Secretariat: Yes. UNIDO is accredited by the AFB.

Accreditation Expiration Date: 30 October 2027



CONCEPT NOTE PROPOSAL FOR SINGLE COUNTRY

PART I: PROJECT/PROGRAM INFORMATION

Title of Project/Program: Malawi adaptation resilience for sustainable agri-development (MARESA)

Country: Malawi

Thematic Focal Area: Food Security

Type of Implementing Entity: Multilateral Implementing Entity

Implementing Entity: UNIDO

Executing Entities: Ministry of Agriculture, Irrigation and Water Development (MoAIWD) and UNIDO

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

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

Amount of Requested financing for PFG: 150,000 U.S Dollars

Letter of Endorsement (LOE) signed: Yes ☒ No ☐

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: July 28, 2026

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

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List of Abbreviations and Acronyms

AF	Adaptation Fund
AFB	Adaptation Fund Board
CBA	Community-based adaptation
DA	Designated Authority
DCCMS	Department of Climate Change and Meteorological Services
DoDMA	Department of Disaster Management Affairs
EE	Executing Entity
EIA	Environmental Impact Assessment
ESIA	Environmental and Social Impact Assessment
ESMF	Environmental and Social Management Framework
ESMP	Environmental and Social Management Plan
ESP	Environmental and Social Policy
FAO	Food and Agriculture Organization of the United Nations
GAP	Gender Action Plan
GCF	Green Climate Fund
GDP	Gross Domestic Product
GEF	Global Environment Facility
GFCS	Global Framework for Climate Services
GIS	Geographic Information System
GRM	Grievance Redress Mechanism
IE	Implementing Entity
IFAD	International Fund for Agricultural Development
LDC	Least Developed Countries
MARESA	Malawi Adaptation Resilience for Sustainable Agri-Development
MBS	Malawi Bureau of Standards
MEAL	Monitoring, evaluation, accountability, and learning
MGDS	Malawi Growth and Development Strategy
MoAIWD	Ministry of Agriculture, Irrigation and Water Development
MSME	Micro, Small, and Medium Enterprises
NAP	National Adaptation Plan
NCCMP	National Climate Change Management Policy
NDC	Nationally Determined Contribution
NFWCS	National Framework for Water and Climate Services
NGO	Non-Governmental Organization
OHS	Occupational Health and Safety
PDNA	Post-Disaster Needs Assessment
SRF	Strategic Results Framework
ToC	Theory of Change
UN	United Nations
UNDP	United Nations Development Programme
UNFCCC	United Nations Framework Convention on Climate Change
UNICEF	United Nations International Children's Emergency Fund
USD	United States Dollar
USP	Unidentified sub-project
WEF	Water-Energy-Food
WFP	World Food Programme

Project Background and Context:

A. Overview of the problem

Malawi faces a deepening climate crisis that threatens to reverse hard-won development gains and further entrench structural poverty across the country.¹ Despite its rich natural resource base and significant agricultural potential, Malawi remains among the world's most climate vulnerable countries, with the compounding effects of recurrent floods, prolonged droughts, erratic rainfall, and intensifying tropical cyclones systematically undermining livelihoods, food systems, ecosystems, infrastructure, and economic stability.² Climate-related shocks have become increasingly frequent and severe, with floods, droughts, and cyclones causing widespread displacement, food insecurity, infrastructure damage, and livelihood losses, particularly among rural communities dependent on rainfed agriculture.³ The proposed MARESA Project responds to this urgent challenge by addressing the interconnected drivers of climate risk, environmental degradation, and socioeconomic vulnerability, particularly in the country's most climate-exposed and resource-constrained districts.

B. Economic context

Malawi's economy is structurally narrow and heavily dependent on agriculture, which contributes approximately 30% to Gross Domestic Product (GDP), employs over 80% of rural people, and generates more than 80% of export revenues.⁴ According to the World Bank report (2024), Malawi's GDP is estimated at US\$13–14 billion, with a GDP per capita of approximately US\$650–700, which positions the country as one of the lowest in Africa.⁵ Smallholder farmers operate almost entirely under rain-fed conditions, with only about 4% of cultivated land under irrigation, making the entire economy acutely sensitive to climate variability. Roughly 31% of Malawi's 9.4 million hectares of land is suitable for rain-fed agriculture under traditional farming practices, but this already limited resource is increasingly threatened by population growth, land degradation, and climate change.⁶

As a Least Developed Country (LDC), Malawi has limited fiscal space to absorb climate shocks. Economic modelling has estimated that direct costs from climate change impacts are equivalent to losing at least 5% of GDP annually. Annual flood damage in the Shire River Basin alone results in an average loss of 0.7% of GDP per year, while drought causes a further 1% of GDP in losses across the rest of the country. Food shortages triggered by these climate hazards cause domestic grain prices to rise, erode foreign exchange reserves, fuel inflation, and create knock-on effects on interest rates and the broader macroeconomic outlook, further widening the development gap.⁷

Beyond agriculture, the services sector contributes approximately 51% of GDP and industry roughly 18%, though neither generates sufficient employment, particularly in rural areas where the majority of the population resides. The energy sector compounds economic vulnerability⁸. Over 89% of total energy consumption is derived from biomass, contributing to deforestation and environmental degradation, while per capita electricity consumption remains among the lowest globally.⁹ Limited transport infrastructure, constrained market access, and weak institutional capacity further impede productivity and economic competitiveness. Before the COVID-19 pandemic, economic growth was forecast at around 5% in 2020, supported by improved agricultural production, post-cyclone reconstruction, and resilience investments. However, the pandemic significantly disrupted this trajectory, underscoring the compounded fragility of the national economy to multiple concurrent shocks.

¹ World Bank Group. (2022). *Malawi Country Climate and Development Report*. Washington DC: World Bank Group. Available at: [World Bank CCDR Malawi](#)

² Government of Malawi, Department of Climate Change and Meteorological Services (DCCMS). (2024). *State of the Climate in Malawi 2024*. Lilongwe: Government of Malawi. Available at: [State of Climate Malawi 2024](#)

³ World Bank. (2019). *Disaster Risk Profile: Malawi*. Washington DC: World Bank Group. Available at: [Disaster Risk Profile Malawi PDF](#)

⁴ World Bank Group. (2022).

⁵ World Bank Group (2024)

⁶ Government of Malawi. (2021). *Malawi National Agriculture Policy*. Lilongwe: Ministry of Agriculture.

⁷ World Bank. (2019)

⁸ World Bank. (2024)

⁹ International Energy Agency (IEA). (2023). *Malawi Energy Profile*. Paris: International Energy Agency.

C. Social and development context

Malawi's population of approximately 20-21 million is predominantly rural, with around 82% of citizens living outside urban centres and depending on subsistence or smallholder agriculture for their livelihoods. The population has been growing at an average rate of approximately 2.8% per year since 2000, placing intensifying pressure on an already degraded natural resource base. The overall average life expectancy is around 63-65 years, reflecting improving but persistent inequalities in access to health, education, and social services.¹⁰

Widespread poverty, low human development indicators, and limited access to basic services define the social landscape. Multidimensional poverty is particularly acute in rural areas, where access to services is limited. Food and nutrition insecurity is a critical concern, with stunting affecting 35–37% of children under five, reflecting chronic undernutrition. Access to basic services remains uneven: 65–70% have access to improved water sources, while electricity access is only 15–20% nationally, and below 10% in rural areas.¹¹ These structural inequalities are not merely development challenges; they are direct drivers of climate vulnerability. Poverty forces people to heavily depend on natural resources for energy (fuel wood), food, construction materials, and medicine, creating a vicious cycle of environmental degradation and exposure to climate risks. Rapid population growth has led to the expansion of agriculture into marginal and fragile areas, including wetlands, riverbanks, and mountain slopes, further reducing the resilience of ecosystems to climate extremes.

Gender and social inclusion add critical dimensions to the problem. Scientific evidence and rapid gender analyses confirm that women, youth, children, people with disabilities, and the elderly are disproportionately impacted by climate-induced disasters. Women face restrictive gender norms, increased time poverty, and exclusion from decision-making processes, while gender-specific barriers in prevention, preparedness, and recovery hinder their access to the means and capacities needed for resilience. Malawi's updated NDC (2021) explicitly identifies social protection and gender as a priority adaptation sector, recognizing that effective climate adaptation must be grounded in inclusive approaches that address differentiated vulnerabilities across social groups.¹²



The project's indicative target districts - Karonga, Machinga, Mangochi, Phalombe, Nsanje, Chikwawa, and the Lower Shire areas of Zomba - are shown in Figure 1. Final sites will be confirmed with the Government of Malawi through climate-risk screening, technical feasibility analysis, safeguards assessment, and inclusive consultations. These districts include some of the country's most socioeconomically disadvantaged communities, characterized by high rural poverty, natural-resource-dependent livelihoods, limited infrastructure, and low adaptive capacity. Most smallholder farmers in these regions are resource-poor with very limited capacity to

absorb shocks arising from climate change, particularly floods, strong winds, and droughts. Vulnerability is further amplified by limited access to electricity, irrigation, markets, and social protection services.

Figure 1. Indicative MARESA Target Districts in Malawi

D. Environmental context

Environmental degradation in Malawi both drives and is exacerbated by climate change, creating compounding risks across sectors. Malawi experiences one of the highest deforestation rates in Africa, estimated at 2–3% per year, driven by agricultural expansion, fuelwood demand, and unsustainable land

¹⁰ United Nations Department of Economic and Social Affairs (UN DESA). (2024). *World Population Prospects 2024: Malawi Profile*. UN New York

¹¹ Malawi National Statistical Office (NSO) and ICF. (2023). *Malawi Demographic and Health Survey 2023*. Lilongwe and Rockville, Maryland.

¹² Malawi [Third Nationally Determined Contribution \(NDC 3.0\)](#), formally submitted to the UNFCCC July 17, 2026.

use. Deforestation, fuelled by biomass dependency for cooking and energy, reduces ecosystem resilience, accelerates soil erosion, and increases the severity and frequency of floods and droughts. Land degradation from exploitative farming practices, including mono-cropping, removal of crop residues, and cultivation of fragile areas, affects more than 40% of cultivated land and is rapidly depleting soil organic matter and undermining the long-term productivity of agricultural land. The country has 87 forest reserves, five national parks, four wildlife reserves, and three nature sanctuaries, but these are under increasing threat from habitat loss, fragmentation, unsustainable land use, and climate impacts.

The fisheries sector illustrates the scale of environmental pressure. Malawi's fisheries are among the most economically important in the country, providing about 70% of animal protein and 40% of total protein intake for most of the population. However, overfishing, weed infestation, eutrophication, and environmental degradation have led to dramatic declines in fish landings in recent years, threatening livelihoods and food security simultaneously. The overdependence on traditional biomass and fossil fuels to meet growing energy needs is simultaneously depleting forest resources as carbon sinks and deepening climate vulnerability.

Water resource management presents a further environmental challenge. Rainfall variability, combined with poor catchment management and the expansion of agriculture into watershed areas, is undermining both rain-fed agriculture and the hydropower systems that supply most of Malawi's electricity. River basins across the country are under severe pressure from deforestation, unsustainable agriculture, settlements, mining, and industrial activity. In the project's target districts, environmental stresses are especially acute: deforestation and land degradation along the Lower Shire Valley and lakeshore zones have reduced the buffering capacity of natural ecosystems, making communities more exposed to flooding and drought alike.

Critically, hydrometeorological monitoring and early warning systems, essential tools for managing these environmental risks, remain severely underdeveloped. Malawi's National Framework for Water and Climate Services (NFWCS) identifies significant gaps in the country's observational infrastructure, including limited numbers of functioning meteorological and hydrological stations, inadequate computing capacity for climate modelling and downscaling, weak cross-sectoral coordination in producing and disseminating climate information, and limited public and institutional awareness of available hydrometeorological services. Currently, only about three reliable stations per district exist, far below the recommended density for adequate coverage. The early warning system for droughts focuses mainly on food security rather than serving as a multi-sectoral tool covering water resources, health, energy, and disaster risk management, leaving critical gaps in risk information precisely in the sectors and communities most exposed to climate hazards.

E. Climate change vulnerability, risk and projections

Malawi's updated NDC (2021) draws on the Third National Communication to the UNFCCC to provide the most current national assessment of climate risk. Key findings include: temperatures in Malawi are projected to rise by 1.3°C to 2.6°C under modelled climate scenarios, with minimum temperatures exhibiting a faster rate of increase than maximum temperatures; rainfall patterns are expected to become increasingly erratic, with an insignificant decrease during October–December and an increase during January–March; and El Niño conditions are expected to increase climate extremes, resulting in greater severity, magnitude, and frequency of floods, droughts, and strong winds.

Over the past five decades, Malawi has experienced more than 19 major flooding events and at least seven severe droughts. The 2015 floods, the worst in 50 years, affected over one million people, displaced 230,000, and killed 106. Between March 7 and 9, 2019, Tropical Cyclone Idai affected nearly 870,000 people across 15 districts. According to the Government of Malawi Post-Disaster Needs Assessment (PDNA) and humanitarian reports, approximately 2.27 million people were affected by Cyclone Freddy in Malawi in 2023, of which around 659,000 people were displaced from their homes,

679 were dead, and over 2,100 were injured. The agriculture sector suffers the greatest losses from these events. Most smallholder farmers are resource-poor and have very limited capacity to contain climate shocks, with food security remaining a persistent concern in affected districts. As a result, climate change is compounding a cycle of food insecurity, economic loss, and structural underdevelopment across the country.

The sectoral risk profile presented in the NDC identifies climate drivers and key risks across six priority sectors. Agriculture, fisheries, and livestock face reduced crop productivity from heat and drought stress, adverse effects on livestock linked to increased pests and diseases, and disrupted food system infrastructure from flood impacts. Water resources face compounded stress from overexploitation and degradation, with drought stress exacerbated in already drought-prone regions. Ecosystems and biodiversity confront shifts in biome distribution, species extinction risks, and severe impacts on wildlife from climate-sensitive diseases. Infrastructure, buildings, and energy systems face disruption to transport, public services, and supply chains from extreme weather events. Human health confronts changes in the incidence and geographic range of vector- and water-borne diseases, increased malnutrition from declining crop yields, and increased migration linked to climate extremes.

F. National development and climate policy/strategy context

The Government of Malawi has established a robust and evolving policy and institutional architecture to address climate change, within which the proposed project is firmly anchored. Malawi 2063, the country's overarching long-term development vision, sets out the ambition to become an inclusively wealthy and self-reliant industrialized upper-middle-income country by 2063, with climate resilience, green economy initiatives, and disaster risk reduction integrated as foundational pillars of this transformation.

The Malawi Growth and Development Strategy III (MGDS III, 2017–2022) identifies agriculture, water development, and climate change as the first of five key priority areas, with adaptation strategies focused on increased agricultural production and productivity, expanded irrigation, integrated water resources management, and improved climate monitoring for early warning, preparedness, and timely response. The National Climate Change Management Policy (NCCMP, 2016) provides strategic direction across six priority areas: climate change adaptation; mitigation; capacity building, education, training, and awareness; research and technology transfer; climate financing; and cross-cutting issues including gender and population dynamics.

Malawi's updated NDC (July 2021) represents the country's most comprehensive and current statement of climate commitments under the Paris Agreement. The NDC covers the period 2020–2040 and identifies ten strategic adaptation options organized around three pillars: institutional framework; knowledge, technology, and financing; and resilience of the most vulnerable. Priority adaptation thematic areas identified in the NDC include effective and efficient early warning systems; accessible and harmless water; blooming biodiversity, ecosystems, and eco-tourism; smart agriculture, livestock, and fisheries; climate-proofed infrastructure, buildings, and energy systems; and healthy and protected people. The total estimated cost for Malawi's NDC adaptation measures through 2040 is approximately USD 4.5 billion, with around USD 1.23 billion required in the first decade (2020–2030) alone. Meeting these requirements is conditional on international financial support, given Malawi's limited domestic fiscal capacity.

The National Framework for Water and Climate Services (NFWCS) provides a further strategic anchor for the project. Aligned with the Global Framework for Climate Services (GFCS) and the United Nations Early Warning for All initiative, the NFWCS sets out a strategic plan for improving hydrometeorological observations and monitoring, information systems, user interface platforms, and research and modelling capacity through 2028, with a total estimated budget of USD 63.4 million. The NFWCS explicitly acknowledges critical gaps in the current system, including inadequate station networks, insufficient data management systems, weak cross-sectoral coordination, and limited public awareness, that must be

addressed to support effective climate risk management across the country.

The NAP Framework (2020), aligned with the NDC and the NCCMP, reaffirms the vision of a country with people, ecosystems, and infrastructure that are resilient to the impacts of climate change. It identifies five mandates for adaptation action: improving community resilience through agricultural production, infrastructure development, and disaster risk management; enhancing sustainable utilization of natural resources; improving environmental management, particularly soil and land management; enhancing conservation and restoration of biodiversity and ecosystems; and providing climate change adaptation advocacy to policymakers.

G. Development challenge and rationale for the project

The combination of structural poverty, environmental fragility, climate exposure, and institutional capacity constraints places Malawi, and particularly the target project districts, at the sharp end of the global climate crisis. The proposed project directly addresses this challenge by targeting the most climate-exposed and socioeconomically vulnerable communities and ecosystems in the country. The project districts share a common profile of high dependence on natural resource-based livelihoods, limited adaptive capacity, recurrent climate hazards, and insufficient access to the services, technologies, and information needed to build durable resilience.

Without significant and targeted investment in climate adaptation, the trends described above are projected to deepen, threatening food security, ecosystem integrity, and the country's broader development aspirations. The project is directly aligned with Malawi's national priorities as articulated in Malawi 2063, the MGDS III, the updated NDC (2021), the NAP Framework (2020), the NFWCS, and the NCCMP. By contributing to the integrated resilience of landscapes, livelihoods, and communities in the target districts, the project will help Malawi close the adaptation gap and strengthen the country's capacity to implement its NDC commitments, contributing to both national development goals and global climate ambitions under the Paris Agreement.

H. Climate adaptation barriers in the project locations

The targeted districts face interlocking barriers that severely constrain the ability of communities, institutions, and ecosystems to adapt to climate change.

Barrier 1: Structural poverty, food insecurity, and limited adaptive capacity: High levels of poverty and food insecurity significantly limit the adaptive capacity of communities in the project districts. With over half of Malawi's population living below the poverty line and climate-related losses estimated at approximately 5% of GDP annually, most smallholder farmers and fishing communities have limited resources to invest in resilience (NDC, 2021; NFWCS, 2024). Approximately 3.3 million people in the project-affected districts were already food insecure before the 2015 floods, reflecting the fragile baseline from which communities must absorb recurring climate shocks (NDC, 2021). Under these conditions, immediate survival needs often take precedence over long-term resource stewardship, reinforcing a cycle of environmental degradation and growing vulnerability, with women, children, the elderly, and persons with disabilities bearing a disproportionate share of the burden (NDC, 2021; NFWCS, 2024).

Barrier 2: Rain-fed agriculture dependency, land degradation, and ecosystem collapse: The project districts are heavily dependent on subsistence rain-fed agriculture, with only about 4% of cultivated land under irrigation, making livelihoods and food security acutely sensitive to increasing erratic rainfall (NDC, 2021). Limited crop diversification, inadequate post-harvest storage, and the absence of agricultural insurance mean that climate shocks translate rapidly into household food crises (NDC, 2021). Only 31% of Malawi's land area is suitable for rain-fed agriculture, and this limited base is under growing pressure from land degradation, insecure tenure, poor farming practices, and expansion into ecologically fragile areas (NDC, 2021). In the Lower Shire Valley and lakeshore districts,

deforestation has reduced natural buffers against floods and droughts, while overfishing and habitat degradation have significantly reduced fish catches, which is a serious concern for communities that rely on fisheries for up to 70% of their animal protein intake (NDC, 2021). Fragmented coordination across forestry, agriculture, environment, and water sectors has limited the effectiveness of integrated landscape-level responses to these compounding pressures (NDC, 2021).

Barrier 3: Inadequate physical infrastructure and limited energy access: Limited access to modern energy services and productive post-harvest infrastructure significantly constrains the adaptive capacity and economic resilience of communities in the project districts. Over 89% of Malawi's energy consumption comes from biomass, with rural electricity access rates remaining extremely low, locking households into fuelwood dependency that drives deforestation and limits access to productive applications such as irrigation, food processing, and cold storage (NDC, 2021). Without affordable energy and functional storage facilities, smallholder farmers face substantial post-harvest losses and are compelled to sell produce at harvest time when prices are lowest, undermining income stability and long-term resilience. The NDC identifies solar-powered irrigation, hermetic storage technologies, farmer organization strengthening, and value chain development as priority adaptation measures, while Malawi 2063 recognizes that smallholder productivity gains must be matched by market access improvements to translate into sustained livelihood resilience. Furthermore, the NDC notes that improved energy access directly increases adaptive capacity by enabling off-farm income diversification and reducing dependence on climate-sensitive agriculture (NDC, 2021).

Barrier 4: Knowledge gaps and low climate change awareness: Limited climate change awareness and knowledge gaps at community, institutional, and sector levels constrain the ability of practitioners and communities to translate climate information into adaptive action. Malawi's NAP stocktaking identified low awareness across all levels of society, a limited number of sectoral experts, and weak institutional capacity for climate change management as core structural weaknesses in the country's adaptation architecture (NAP Framework, 2020). At the community level, this translates into limited understanding of the links between climate variability and livelihood decisions in agriculture, health, fisheries, and water management, a gap confirmed by the NFWCS, which identifies insufficient practitioner and community understanding of hydrometeorological information as a critical constraint across all climate-sensitive sectors (NFWCS, 2024). The limited integration of indigenous and traditional knowledge into formal climate monitoring further narrows the information base available to communities in the project districts (NAP Framework, 2020).

Barrier 5: Inadequate early warning systems and climate information services: The project districts lack reliable, localized climate information infrastructure to support timely preparedness and adaptive decision-making. Nationally, there are only 21 principal meteorological stations, no weather radar, no upper air observation station, and only one satellite observation station (NFWCS, 2024). Of 270 hydrological monitoring stations, approximately 50% are not functional, data transmission remains non-automated, and not all 81 Automatic Weather Stations are operational, creating significant data gaps across the project districts (NFWCS, 2024). The existing drought early warning system focuses narrowly on food security rather than serving as a multi-sectoral tool covering water resources, health, and energy, while limitations in power supply and telecommunications further constrain climate services delivery at the field level (NDC, 2021; NFWCS, 2024). Even where forecasts are available, limited community and practitioner understanding of their sectoral relevance means they are frequently not translated into adaptive action (NFWCS, 2024).

Barrier 6: Weak institutional capacity and fragmented cross-sectoral coordination: These limitations reduce the translation of available knowledge and information into coherent adaptation action at national, district, and community levels. The NAP coordination unit requires strengthening in both staffing and resources, while climate change activities at the district level have historically been crowded

out by competing priorities in health and education (NAP Framework, 2020). Formalized platforms for cross-sectoral climate services co-production do not exist, dialogue remains largely project-based and informal, and the private sector is largely absent from adaptation planning processes (NFWCS, 2024). Critical legal frameworks, including a National Climate Change Act and National Meteorological Act, remain absent, leaving the institutional architecture for climate services without an adequate legal foundation (NFWCS, 2024). Decentralization remains incomplete, and monitoring of adaptation activities within district development plans has not been consistently effective (NAP Framework, 2020).

Barrier 7: Insufficient and unpredictable climate finance: Institutional willingness to act on adaptation is further constrained by a structural and acute financing gap at every level. Malawi's NDC estimates that adaptation measures will require approximately USD 4.5 billion through 2040, with around USD 1.23 billion needed in the first decade, yet domestic budgets are wholly insufficient, and most prioritized measures are conditional on international financial support (NDC, 2021). Climate finance challenges identified in the NDC include insufficient domestic funds, a limited national budget for implementing climate actions, and negligible private sector investment in climate change activities (NDC, 2021). The NFWCS requires USD 63.4 million for hydrometeorological investments over 2024–2028, with institutions heavily dependent on donor funding for both human resource development and infrastructure, creating fragility and unpredictability in service delivery (NFWCS, 2024). At the community level, the absence of credit for soil conservation, climate risk insurance products, and accessible financing for productive assets such as irrigation equipment and improved seeds leaves households without the tools needed to invest in their own adaptation (NDC, 2021).

Barrier 8: Limited adoption of climate-smart technologies and practices: Access to and adoption of climate-smart technologies remains limited across the project districts despite their recognized importance for adaptation. Malawi's Technology Needs Assessment identifies priority technologies, including landscape restoration, integrated crop-livestock-aquaculture systems, rainwater harvesting, and flood management, as significantly under-deployed, with the NDC explicitly flagging technology adoption as a key adaptation challenge (NDC, 2021). At the community level, barriers include the high cost of technologies relative to household incomes, limited agricultural extension services, and inadequate availability of drought-tolerant seed varieties (NDC, 2021). At the institutional level, the NFWCS identifies insufficient human resources in climate modelling, remote sensing, and modern data analysis, alongside inadequate computing capacity to produce district-level hydrometeorological products, as critical constraints (NFWCS, 2024).

Barrier 9: Gender inequality, social exclusion, and differentiated vulnerability: Gender inequality and social exclusion remain persistent barriers to effective climate adaptation across the project districts. Women bear a disproportionate share of climate impacts while having the least access to the resources, services, and decision-making spaces needed to adapt, including land, credit, agricultural inputs, extension services, and climate information (NFWCS, 2024). Children, people with disabilities, and the elderly are similarly underserved by existing preparedness and response systems (NFWCS, 2024). Malawi's NDC acknowledges that gender-responsive adaptation planning and gender-disaggregated outcome tracking remains unmet national requirements (NDC, 2021), and the NFWCS notes that limited gender and inclusion capacity among technical staff continues to reduce the reach of climate services to the most vulnerable groups (NFWCS, 2024).

Project Objectives

The overarching objective of the project is to reduce the climate vulnerability of communities in the most exposed and resource-poor districts of Malawi.

This objective will be achieved through an integrated, locally owned, and gender-responsive approach that addresses the structural, biophysical, informational, financial, and institutional barriers that undermine adaptation.

Specific Objectives

- Strengthen Community-based adaptation planning and governance (addresses barriers 1,2, and 8).
- Develop and rehabilitate climate-resilient infrastructure and expand decentralized renewable energy access (addresses barriers 3 and 5)
- Strengthen climate knowledge systems, early warning capacity, and community-level climate information services (addresses barriers 4 and 5).
- Build inclusive governance, sustainable climate finance, and Institutional Capacities for Long-Term Adaptation (addresses barriers 6, 7, 8, 9)

Adaptation Fund alignment: MARESA supports the Adaptation Fund's strategic objectives to reduce vulnerability, increase adaptive capacity, and strengthen awareness and ownership of adaptation and climate-risk-reduction processes. Under the revised Strategic Results Framework guidance issued in July 2026, the project contributes to Strategic Outcomes 1-7: reduced hazard exposure; stronger institutional capacity; greater awareness and ownership; climate-resilient services and infrastructure; ecosystem resilience; diversified climate-resilient livelihoods; and improved policies and plans. The detailed mapping is provided in Table 8.

Project Components and Financing

Table 1. Project Components and Financing

Project component / Executing Entity	Expected concrete outputs/ output-level allocation	Expected outcome	Component amount (USD)
1. Community-based adaptation planning, governance, and climate information systems. EE: MoAIWD	1.1.1 Risk and WEF assessments/ \$140,000 1.1.2 Inclusive adaptation plans/ \$150,000 1.1.3 Governance and grievance systems/ \$90,000 1.1.4 Climate information and early warning/ \$360,000 1.1.5 Climate-literacy and institutional capacity/ \$160,000	Outcome 1: Adaptive capacity, local ownership, and climate-informed decision-making strengthened.	900,000
2. Climate-resilient agriculture, irrigation, and ecosystem restoration EE: MoAIWD	2.1.1 Climate-smart agriculture/ \$800,000 2.1.2 Irrigation and water systems/ \$1,050,000 2.1.3 Landscape and watershed restoration/ \$650,000 2.1.4 Community nurseries and planting materials/ \$200,000 2.1.5 Women- and youth-led adaptation enterprises/ \$300,000	Outcome 2: Food security, ecosystem resilience, and adaptive livelihoods strengthened.	3,000,000
3. Climate-resilient infrastructure and decentralized renewable energy EE: UNIDO	3.1.1 Water, storage, post-harvest, and market infrastructure/ \$800,000 3.1.2 Flood and drought protection/ \$700,000 3.1.3 Decentralized renewable-energy systems/ \$950,000 3.1.4 Community operations and maintenance systems/ \$250,000	Outcome 3: Resilience of vulnerable communities and productive systems enhanced.	2,700,000
4. Inclusive climate finance, adaptation MSMEs, and institutional capacity EE: UNIDO	4.1.1 MSME finance and investment linkages/ \$250,000 4.1.2 Business and technical assistance/ \$350,000 4.1.3 Gender-responsive community finance/ \$250,000 4.1.4 National and sub-national institutional capacity/ \$255,184 4.1.5 Replication and scaling mechanisms/ \$150,000	Outcome 4: Long-term institutional capacity and financial sustainability strengthened.	1,255,184
5. Project coordination, learning, monitoring, and knowledge management	5.1.1 Coordination, fiduciary systems, and safeguards/ \$350,000 5.1.2 Knowledge-management systems/ \$180,000 5.1.3 Dissemination and policy learning/ \$140,000	Outcome 5: Effective delivery, accountability, learning, and scaling ensured.	878,407

Project component / Executing Entity	Expected concrete outputs/ output-level allocation	Expected outcome	Component amount (USD)
EE: UNIDO	5.1.4 MEAL systems and evaluations/ \$208,407		
Project/ programme costs (Components 1-5)			8,733,951
Project/ programme execution costs	MoAIWD: \$409,392,381; UNIDO: \$73,607		482,999
Total project /programme cost			9,216,590
Implementing Entity management fee (8.5%)			783,410
Amount of financing requested			10,000,000

UNIDO will execute Components 3, 4 and 5, valued at USD 4,833,591. Its allocated execution cost is USD 73,607, which is 1.5% of that amount when rounded down and therefore complies with the Adaptation Fund cap applicable when an Implementing Entity also serves as an Executing Entity. The remaining USD 409,392 of execution costs is allocated to MoAIWD. The detailed execution-cost budget and functional separation between UNIDO's implementing and executing roles will be confirmed in the full proposal.

Project Calendar:

Table 2. Project Calendar

Milestones	Expected Dates
Start of Project/Program Implementation	July 2028
Mid-term Review (if planned)	January 2030
Project/Program Closing	June 2033
Terminal Evaluation	December 2033

PART II: PROJECT JUSTIFICATION

A. Project Components and Contribution to Climate Resilience

The Theory of Change is structured in five mutually reinforcing causal pathways, each tracing a direct line from a specific climate hazard through the vulnerability it creates to a targeted intervention, measurable outputs, resilience outcomes, and long-term systemic impact as described below. The Theory of Change is structured in five mutually reinforcing causal pathways, each tracing a direct line from a climate hazard through vulnerability, intervention, outputs, resilience outcomes, and long-term systemic impact, as illustrated in Figure 2.

Pathway 1: Community-based adaptation planning, governance and climate information systems (institutional): this intervention closes the information and governance gap that leaves communities unprepared for floods, droughts, and cyclones through participatory risk assessments, inclusive adaptation plans, early warning systems and climate literacy, delivering climate-informed decision-

making that shifts communities from reactive coping to anticipatory adaptation (led by the Ministry, with UNIDO support).

Pathway 2: Climate-resilient agriculture, irrigation and ecosystem restoration (natural systems): this intervention tackles drought- and degradation-driven food insecurity in a >95% rain-fed farming system by scaling climate-smart agriculture, resilient and solar-powered irrigation, ecosystem restoration and women- and youth-led enterprises, which result in sustaining food security, livelihoods and ecosystem services under climate stress.

Pathway 3: Climate-resilient infrastructure and decentralized renewable energy (physical systems): this intervention counters climate-damaged infrastructure and biomass-dependent energy poverty through climate-proofed water, storage and market infrastructure, flood/drought protection and adaptation-dedicated renewable energy, generating reliable service access during shocks and contributing to a long-term, climate-proof development foundation.

Pathway 4: Inclusive climate finance, adaptation MSMEs and institutional capacity (financial sustainability): this intervention tackles the structural barrier of financial exclusion and weak institutional capacity that prevents even well-aware communities from investing in adaptation, by expanding inclusive climate finance and MSME support while strengthening institutional planning systems, ultimately enabling a self-sustaining green economy that mobilizes private and public adaptation investment beyond the project lifespan.

Pathway 5: Project coordination, learning, monitoring, and knowledge management (delivery and learning): a cross-cutting pathway that counters fragmented delivery through robust coordination, safeguards, MEAL and knowledge management, ensuring equitable, evidence-driven and adaptive implementation, and embedding accountable systems into national practice for lasting impact.

Consequently, these pathways reflect a coherent theory that climate vulnerability is simultaneously physical, institutional, financial and systemic, and that durable resilience requires addressing all dimensions in parallel, reinforced by enabling factors of political will, community ownership and climate finance, built in cross-cutting principles of gender equality, community-based adaptation, Do No Harm and rights-based approaches, and validated by the assumption that institutions remain functional, communities stay engaged, and implementation proceeds without catastrophic disruption.

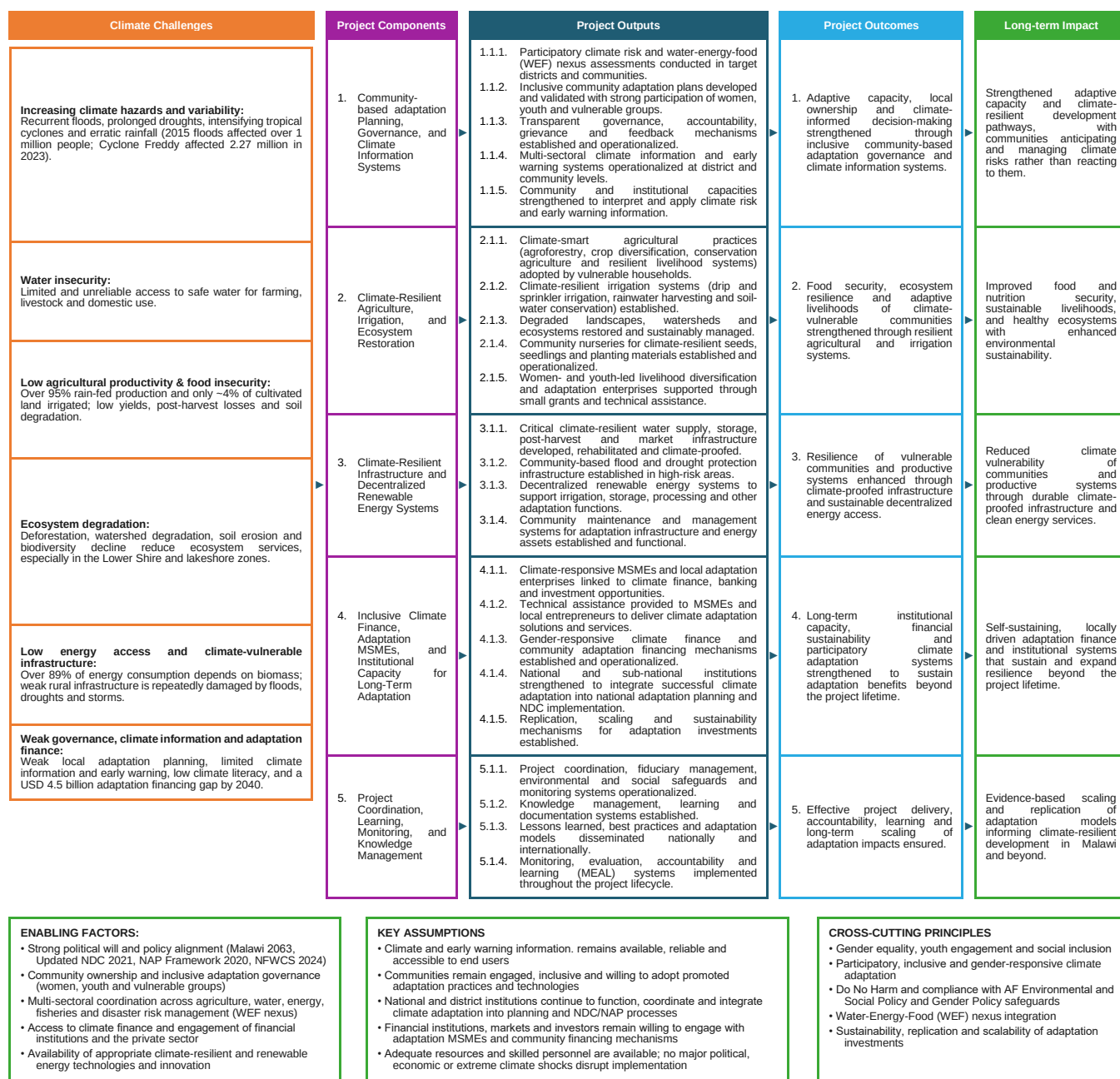


Figure 2. Theory of Change

Component 1: Community-based adaptation Planning, Governance, and Climate Information Systems: This component aims to strengthen adaptive capacity, local ownership, and climate-informed decision-making through inclusive community-based adaptation governance and improved climate information services. Malawi's climate adaptation efforts continue to face major institutional and informational barriers, including weak local adaptation planning systems, fragmented coordination, limited climate information dissemination, inadequate hydrometeorological infrastructure, and low climate literacy among communities and local institutions. The National Framework for Weather and Climate Services (NFWCS) identified significant gaps in climate observation systems, forecasting capacity, early warning dissemination, and user understanding of climate information, particularly in rural and climate-sensitive districts (Government of Malawi, 2024). These weaknesses limit the ability of communities and institutions to anticipate, prepare for, and respond effectively to climate-related risks.

Executing entity and indicative scale. MoAIWD will execute this component through national technical departments, the seven target district councils, extension services, and community institutions. Indicative concept-stage targets are: seven district climate-risk and Water-Energy-Food nexus assessments; at least 35 community risk profiles and gender-responsive adaptation plans; 35 functioning adaptation committees and grievance channels; seven district-linked multi-hazard early warning and advisory systems covering at least 150,000 people; and climate-information training for at least 1,400 local officials, extension staff, community leaders, and representatives of women, youth, and vulnerable groups. Targets will be validated during full proposal preparation.

USP status. Assessment methods, planning processes, governance mechanisms, training, and institutional-support activities are fully defined at concept stage. Exact community locations and any site-specific monitoring equipment are partially unidentified and will be confirmed during full proposal preparation; no fully unidentified sub-project will be financed.

Outcome 1: Adaptive capacity, local ownership, and climate-informed decision-making strengthened through inclusive community-based adaptation governance and climate information systems.

Output 1.1.1 Participatory climate risk and water-food-energy (WEF) nexus assessments conducted in target districts and communities

Activities

- Conduct participatory climate vulnerability, risk, and Water-Energy-Food (WEF) nexus assessments in target communities.
- Undertake climate hotspot mapping and localized risk profiling.
- Assess livelihood vulnerability, ecosystem degradation, water stress, and energy access challenges.
- Develop community climate adaptation baseline information systems.
- Generate GIS-supported climate vulnerability and adaptation planning maps.

Output 1.1.2 Inclusive community adaptation plans developed and validated with strong participation of women, youth, and vulnerable groups

Activities

- Facilitate community adaptation planning workshops with women, youth, farmers, fisher groups, and vulnerable households.
- Develop gender-responsive community adaptation action plans.
- Support integration of adaptation priorities into district development plans.
- Establish and strengthen local adaptation committees and governance platforms.
- Facilitate stakeholder validation and local adaptation dialogue processes.

Output 1.1.3 Transparent governance, accountability, grievance, and feedback mechanisms established and operationalized

Activities

- Develop and operationalize transparency, accountability, grievance, and community feedback mechanisms.
- Establish participatory community monitoring and accountability systems.
- Strengthen fiduciary oversight and local governance systems.
- Conduct governance and social accountability training.
- Facilitate regular community review and consultation meetings.

Output 1.1.4 Multi-sectoral climate information and early warning systems operationalized at district and community levels.

Activities

- Install and strengthen localized climate information and early warning systems.
- Strengthen dissemination of localized weather and climate advisories.
- Facilitate coordination between meteorological institutions and local governments.

- Support community-based climate monitoring systems.
- Develop multi-sectoral climate communication and information platforms.

Output 1.1.5 Community and institutional capacities strengthened to interpret and apply climate risk and early warning information.

Activities

- Train communities, extension workers, and local institutions on the interpretation and use of climate and early warning information.
- Conduct climate adaptation and disaster preparedness awareness campaigns.
- Produce and disseminate gender-responsive climate advisory materials.
- Support climate literacy programs targeting schools, women, and youth groups.
- Establish community climate learning and knowledge-sharing platforms.

Component 2: Climate-Resilient Agriculture, Irrigation, and Ecosystem Restoration. This component seeks to strengthen food security, ecosystem resilience, and adaptive livelihoods through climate-smart agriculture, climate-resilient irrigation systems, and integrated ecosystem restoration. Malawi's agricultural sector is highly vulnerable to climate variability because over 95% of agricultural production depends on rain-fed systems, while only about 4% of cultivated land is irrigated. Recurrent droughts, erratic rainfall, floods, soil erosion, declining soil fertility, and environmental degradation continue to reduce agricultural productivity and household resilience (Government of Malawi, 2021). Deforestation and watershed degradation in the Lower Shire and lakeshore zones have further reduced the capacity of ecosystems to regulate water flows, maintain soil fertility, and buffer climate shocks. The component specifically targets climate-dependent smallholder farmers, fishing communities, and women- and youth-led producers in the districts of Karonga, Machinga, Mangochi, Phalombe, Nsanje, Chikwawa, and the Lower Shire areas of Zomba, with particular emphasis on resource-poor households that have the least capacity to cope with climate shocks and failed production seasons. Given the high dependence on rain-fed agriculture and limited irrigation coverage, even modest climatic shocks can rapidly translate into crop failure, food insecurity, and significant livelihood losses. To address these vulnerabilities, the component will promote integrated climate-smart agricultural systems that improve productivity, diversify livelihoods, restore ecosystem services, and strengthen resilience to climate stress. Interventions will include the adoption of drought-tolerant crop varieties, conservation agriculture, agroforestry, crop diversification, integrated watershed management, soil and water conservation measures, climate-resilient and solar-powered irrigation systems, rainwater harvesting, and the restoration of degraded landscapes and ecosystems. These measures will reduce dependence on single rain-fed crops and limited livelihood options while improving water availability and sustaining agricultural production during periods of drought and water scarcity.

The component will also support the development of diversified, women- and youth-led adaptation enterprises, creating alternative and more resilient income opportunities that reduce reliance on highly climate-sensitive production systems. Watershed and landscape restoration interventions will rebuild ecosystem functions and strengthen the natural buffers that moderate both floods and droughts, thereby enhancing long-term water security and ecosystem resilience.

Collectively, these interventions will lower the sensitivity of food and livelihood systems to climate extremes, strengthen adaptive capacity, and enhance the ability of vulnerable households to maintain food security, income, and resilience in the face of increasingly variable and uncertain climatic conditions.

Executing entity and indicative scale. MoAIWD will execute this component with district agriculture, irrigation, forestry, fisheries, and water authorities. Indicative targets are: 30,000 vulnerable farming households adopting climate-resilient practices on about 6,000 hectares; 20 irrigation or rainwater-harvesting schemes serving about 1,000 hectares; 3,000 hectares of degraded landscapes and watersheds restored; 14 community nurseries producing at least 700,000 resilient seedlings and planting materials; and 70 women- or youth-led adaptation livelihood enterprises supported. At least 50% of individual participants will be women, consistent with the initial gender assessment in Annex II.

USP status. The intervention menu and technical approaches are defined. Scheme sites, detailed engineering, beneficiary packages, and exact restoration blocks are partially unidentified and will be finalized,

as far as possible, during full proposal preparation. Any residual site selection during implementation will occur only within the approved districts and intervention menu and will be subject to eligibility, exclusion, climate rationale, gender, technical-feasibility, and safeguards screening before approval.

Outcome 2: Food security, ecosystem resilience, and adaptive livelihoods of climate-vulnerable communities are strengthened through resilient agricultural and irrigation systems.

Output 2.1.1 Climate-smart agricultural practices, including agroforestry, crop diversification, conservation agriculture, and resilient livelihood systems adopted by vulnerable households

Activities

- Promote climate-smart agriculture practices including, agroforestry, conservation agriculture, crop diversification, and soil-water conservation.
- Support adoption of drought-tolerant and climate-resilient crop varieties.
- Promote integrated crop-livestock systems and resilient farming systems.
- Strengthen farmer field schools and climate-smart extension systems.
- Facilitate sustainable land management and soil fertility restoration practices.

Output 2.1.2 Climate-resilient irrigation systems, including drip irrigation, sprinkler irrigation, rainwater harvesting, and soil-water conservation systems established

Activities

- Establish and rehabilitate climate-resilient irrigation systems including drip irrigation, sprinkler systems, and rainwater harvesting structures.
- Promote solar-powered irrigation systems.
- Construct community water harvesting and storage systems.
- Support soil-water conservation and water-use efficiency measures.
- Strengthen community irrigation governance and management systems.

Output 2.1.3 Degraded landscapes, watersheds, and ecosystems restored and sustainably managed

Activities

- Support integrated watershed and landscape restoration activities in degraded ecosystems.
- Undertake reforestation and afforestation using climate-resilient and indigenous species.
- Promote assisted natural regeneration and community forestry.
- Strengthen erosion control and riverbank stabilization interventions.
- Facilitate community-based ecosystem management and restoration systems.

Output 2.1.4 Community nurseries for climate-resilient seeds, seedlings, and planting materials established and operationalized

Activities

- Establish community nurseries for climate-resilient seeds, seedlings, and planting materials.
- Support multiplication and distribution of resilient seed varieties.
- Train communities' on nursery management and propagations techniques.
- Strengthen local seed and planting material systems.
- Support women and youth groups to manage nurseries and planting enterprises.

Output 2.1.5 Women- and youth-led livelihood diversification and adaptation enterprises supported through small grants and technical assistance

Activities

- Provide technical assistance and small grants for women- and youth-led climate adaptation enterprises.
- Support climate-resilient agribusiness and value addition initiatives.
- Promote beekeeping, aquaculture, agro-processing, and diversified livelihood systems.
- Strengthen entrepreneurship, financial literacy, and enterprise management skills.

- Facilitate access to climate-resilient market opportunities.

Component 3: Climate-Resilient Infrastructure and Decentralized Renewable Energy Systems

This component aims to strengthen resilience through climate-proofed infrastructure and decentralized renewable energy systems that support adaptation functions and productive livelihoods. Malawi faces severe deficits in climate-resilient infrastructure, particularly in rural areas where communities lack reliable water systems, storage facilities, market infrastructure, irrigation support systems, and modern energy services. Over 89% of national energy consumption depends on biomass, contributing to deforestation and environmental degradation, while rural electrification rates remain extremely low (Government of Malawi, 2021). Weak infrastructure systems are frequently damaged by floods, droughts, and storms, further undermining resilience and local economic development.

This component will support the development and rehabilitation of climate-resilient water supply systems, flood and drought protection infrastructure, post-harvest and storage facilities, climate-resilient market infrastructure, and decentralized renewable energy systems. Renewable energy technologies will support irrigation, agro-processing, cold storage, water supply systems, and productive adaptation functions. The component also emphasizes community management, maintenance systems, and local technical capacities to ensure the sustainability of infrastructure investments. By reducing post-harvest losses, improving water security, strengthening energy access, and protecting communities from climate hazards, the component will directly strengthen adaptation capacity and livelihood resilience.

The specific climate hazards addressed by this component include floods, intensifying tropical cyclones, prolonged droughts, and increasingly erratic rainfall. These hazards repeatedly damage or destroy water systems, roads, markets, and storage facilities, leaving communities without reliable water, energy, or the means to protect their harvests when conventional infrastructure fails. They also result in direct asset losses, significant post-harvest food and income losses immediately following extreme events, and prolonged disruptions to essential services.

The component targets flood- and drought-exposed rural communities and productive systems in the high-risk districts of Karonga, Machinga, Mangochi, Phalombe, Nsanje, Chikwawa, and the Lower Shire areas of Zomba, prioritizing locations where infrastructure deficits are greatest and climate exposure is highest. Vulnerability will be reduced by strengthening and decentralizing the physical systems on which adaptation depends. Climate-proof water supply systems will maintain reliable access to water during droughts and periods of erratic rainfall when conventional systems fail. Community-based flood and drought protection infrastructure, including riverbank stabilization and improved drainage systems, will directly reduce asset and livelihood losses among the most exposed households. Climate-resilient post-harvest and cold storage facilities will protect food security and income by reducing losses at the most vulnerable stage of the value chain, particularly following climate shocks. Decentralized renewable energy systems will be deployed exclusively for adaptation functions, powering irrigation during periods of rainfall failure, operating cold storage during temperature extremes, and sustaining water supply services when climate events disrupt conventional energy systems. Community-based management, operation, and maintenance systems will be established to ensure that these infrastructure investments continue to function effectively over time, thereby sustaining reductions in climate exposure and strengthening service continuity well beyond the project period.

Executing entity and indicative scale. UNIDO will execute this component using a functionally local execution team and cost centre from its Implementing Entity oversight role, sourcing locally qualified engineering and procurement services, in strong consultation with district councils, community asset-management bodies, and regulated energy providers. Indicative targets include at least 14 climate-resilient water, storage, post-harvest, or market facilities; seven community flood- or drought-protection works; 21 decentralized renewable-energy systems dedicated to irrigation, water supply, cold storage, or agro-processing; and 35 trained management committees with maintenance plans and funds. Supported storage and processing facilities will target a reduction of at least 20% in post-harvest losses relative to the baseline established at full proposal stage.

USP status. Infrastructure and renewable-energy categories and adaptation functions are defined, while precise sites, capacities, and designs are partially unidentified. Feasibility studies, climate-risk design parameters, land and water screening, environmental and social assessment, permits, lifecycle-cost analysis,

and operations-and-maintenance arrangements will be completed before procurement or construction.

Note: Infrastructure and renewable energy investments under this component are each explicitly designed to respond to a specific identified climate risk. For instance, climate-resilient water systems maintain reliable supply during droughts and erratic rainfall when conventional systems fail; flood and drought protection infrastructure directly reduces asset and livelihood losses for communities most exposed to these hazards; post-harvest and cold storage facilities protect food security and incomes at their most critical point of vulnerability, immediately after extreme weather events; and climate-resilient market infrastructure maintains economic connectivity during flood seasons. Decentralized renewable energy systems are deployed exclusively for adaptation functions, powering irrigation when rainfall fails, operating cold storage through temperature extremes, and sustaining water supplies when climate events disrupt conventional energy services.

Outcome 3: Resilience of vulnerable communities and productive systems enhanced through climate-proofed infrastructure and sustainable decentralized energy access.

Output 3.1.1 Critical climate-resilient water supply, storage, post-harvest, and market infrastructure developed, rehabilitated, and climate-proofed

Activities

- Develop, rehabilitate, and climate-proof critical water supply systems, storage facilities, and community market infrastructure.
- Construct climate-resilient post-harvest and storage systems.
- Improve water harvesting and water distribution infrastructure.
- Support resilient market access infrastructure.
- Integrate climate resilience standards into infrastructure design.

Output 3.1.2 Community-based flood and drought protection infrastructure established in high-risk areas

Activities

- Construct and strengthen flood and drought protection infrastructure in climate-vulnerable areas.
- Support riverbank stabilization and erosion control systems.
- Establish flood diversion and drainage systems.
- Develop community-based disaster risk reduction infrastructure.
- Support climate-proofing of vulnerable community assets.

Output 3.1.3 Decentralized renewable energy systems installed to support irrigation, storage, processing, and other adaptation functions

Activities

- Install decentralized renewable energy systems to support irrigation, cold storage, agro-processing, and adaptation functions.
- Promote solar-powered productive-use systems.
- Support community mini-grid and off-grid renewable energy systems.
- Strengthen renewable energy technologies for climate adaptation services.
- Facilitate renewable energy access for climate-resilient enterprises.

Output 3.1.4 Community maintenance and management systems for adaptation infrastructure and energy assets established and functional

Activities

- Provide technical training for communities on the operation and maintenance of climate-resilient infrastructure and renewable energy systems.
- Establish community management structures and maintenance funds.
- Support local technical service providers and maintenance enterprises.
- Facilitate long-term sustainability planning for adaptation infrastructure.
- Strengthen local ownership and governance of adaptation assets.

Component 4: Inclusive Climate Finance, Adaptation MSMEs, and Institutional Capacity for Long-Term Adaptation

This component focuses on strengthening long-term adaptation sustainability through inclusive climate finance systems, climate-responsive MSMEs, adaptation enterprises, and institutional capacity strengthening. Malawi faces a major adaptation financing gap, with the updated NDC estimating that adaptation measures will require approximately USD 4.5 billion by 2040 (Government of Malawi, 2021). Access to adaptation finance remains extremely limited among vulnerable communities, women, youth groups, and local enterprises. Financial systems are often inaccessible to smallholder producers and adaptation-focused MSMEs, limiting investment in resilient technologies, climate-smart production systems, and adaptation enterprises.

The component will therefore strengthen adaptation financing mechanisms, business development support systems, and institutional capacities for long-term adaptation planning and implementation. The project will support MSMEs, cooperatives, local entrepreneurs, and adaptation enterprises to access climate finance opportunities and strengthen climate-responsive business systems. Institutional strengthening interventions will support integration of community-based adaptation approaches into district planning systems, NDC implementation, and national adaptation processes. It will also support scaling and replication mechanisms to ensure that successful adaptation models can be expanded beyond the immediate project areas.

This component addresses the full range of climate hazards affecting the target districts, including recurrent droughts, floods, tropical cyclones, and increasingly erratic rainfall, by tackling one of the underlying drivers of vulnerability: limited access to adaptation finance and weak institutional capacities. Even where households and enterprises are aware of climate risks and potential adaptation solutions, inadequate access to affordable and predictable finance often prevents them from investing in drought-tolerant technologies, irrigation systems, climate-resilient storage, renewable energy, and other resilience-building measures. As a result, adaptation gains achieved through project interventions can remain fragile and difficult to sustain once external funding ends.

The component specifically targets climate-exposed smallholder farmers, cooperatives, and adaptation-oriented micro, small, and medium-sized enterprises (MSMEs) across the districts of Karonga, Machinga, Mangochi, Phalombe, Nsanje, Chikwawa, and the Lower Shire areas of Zomba. Particular emphasis will be placed on women, youth, and other marginalized groups that have historically faced barriers to accessing finance, productive assets, and decision-making opportunities, as well as on strengthening the capacities of district and national institutions responsible for sustaining and scaling adaptation action. Vulnerability will be reduced by building the financial and institutional capacities required to support continued adaptation beyond the life of the project. Gender-responsive community financing mechanisms, savings groups, and strengthened linkages with banks and climate investors will provide vulnerable households and producer groups with the means to invest in resilient technologies and adaptation measures. Business development support will enable MSMEs to deliver critical adaptation services (including climate-resilient inputs, renewable energy solutions, agro-processing services, and ecosystem-based enterprises) that directly reduce climate risks and enhance community resilience. In parallel, support for district planning processes, implementation of the Nationally Determined Contributions (NDCs), and knowledge-sharing and replication mechanisms will help embed community-based adaptation within government systems and planning processes. By establishing sustainable financing mechanisms and strengthening institutional systems, the component will transform one-off project investments into a continuous and self-sustaining flow of adaptation finance, services, and support, thereby ensuring that resilience gains are sustained, expanded, and better able to withstand future climate hazards.

Executing entity and indicative scale. UNIDO will execute this component, applying a functionally separate execution team and cost centre from its Implementing Entity oversight role. Indicative targets are: 120 climate-

responsive micro, small, and medium enterprises, cooperatives, or producer organizations receiving business and technical support, at least 60% women- or youth-led; 35 community adaptation-finance groups established or strengthened; at least USD 1 million in additional finance mobilized or committed; 300 green or adaptation-related jobs created or strengthened, at least 50% for women and 40% for youth; seven district plans and relevant national systems integrating tested adaptation models; and five scalable adaptation models documented.

USP status. Institutional strengthening and finance-system activities are defined. Enterprise grants or investments selected during implementation constitute partially unidentified sub-projects within a fixed framework. Eligible adaptation services, districts, grant ceilings, selection criteria, prohibited activities, gender and inclusion thresholds, climate-rationale tests, due diligence, safeguards screening, grievance access, and monitoring requirements will be specified in the full proposal and Environmental and Social Management Plan.

Note: MSMEs and women-led enterprises under this component are supported, specifically to deliver services that directly address identified climate risks. For instance, climate-resilient input suppliers reduce crop failure from drought and erratic rainfall; renewable energy enterprises enable irrigation, cold storage and water supply to function during climate shocks; agro-processing MSMEs reduce post-harvest losses that intensify after extreme weather events; and water and ecosystem service enterprises restore natural buffers that moderate flood and drought impacts. Women-led enterprises are prioritized because women manage the household food security, water and subsistence agriculture systems that are highly vulnerable to climate hazards, making their adaptive enterprise capacity the highest-return adaptation investment. Every enterprise supported, therefore, has a defined climate risk it addresses, a specific vulnerability it reduces, and a measurable adaptation function it performs.

Outcome 4: Long-term institutional capacity, financial sustainability, and participatory climate adaptation systems strengthened to sustain adaptation benefits beyond the project lifetime.

Output 4.1.1 Climate-responsive MSMEs and local adaptation enterprises linked to climate finance, banking, and investment opportunities

Activities

- Link local MSMEs, cooperatives, and adaptation enterprises to climate finance opportunities and investment platforms.
- Support development of bankable adaptation business models.
- Facilitate partnerships with financial institutions and climate investors.
- Promote climate-responsive value chain development.
- Strengthen climate-resilient producer organizations and cooperatives.

Output 4.1.2 Technical assistance provided to MSMEs and local entrepreneurs to deliver climate adaptation solutions and services

Activities

- Provide technical assistance and business development support for climate-responsive MSMEs and entrepreneurs.
- Strengthen entrepreneurship and financial literacy capacities.
- Support business incubation for adaptation enterprises.
- Facilitate market linkages and adaptation-focused value chains.
- Promote climate-resilient technologies and innovation systems.

Output 4.1.3 Gender-responsive climate finance and community adaptation financing mechanisms established and operationalized

Activities

- Establish gender-responsive community adaptation financing and revolving support mechanisms.
- Promote women- and youth-focused climate finance systems.

- Support community savings and adaptation financing groups.
- Develop inclusive adaptation financing governance systems.
- Strengthen financial inclusion for vulnerable groups.

Output 4.1.4 National and sub-national institutions strengthened to integrate successful climate adaptation models into national adaptation planning and NDC implementation.

Activities

- Strengthen institutional capacities of national and sub-national government institutions on climate adaptation planning, implementation, and monitoring.
- Support integration of successful climate adaptation into district development planning.
- Strengthen coordination systems for NDC and NAP implementation.
- Facilitate Water-Energy-Food (WEF) nexus coordination and policy dialogue.
- Improve adaptation monitoring and reporting systems.

Output 4.1.5 Replication, scaling, and sustainability mechanisms for adaptation investments established

Activities

- Develop mechanisms for scaling and replication of successful community-based adaptation models and technologies.
- Document lessons learned and adaptation best practices.
- Facilitate adaptation learning and policy dialogue platforms.
- Develop sustainability and exit strategies for adaptation investments.
- Support integration of project lessons into NAP and NDC implementation processes.

Component 5: Project Coordination, Learning, Monitoring, and Knowledge Management

This component ensures effective project implementation, fiduciary management, safeguards compliance, learning, monitoring, evaluation, and knowledge dissemination. Given the complexity and multi-sectoral nature of climate adaptation investments, strong coordination and adaptive management systems are essential for ensuring accountability, efficiency, sustainability, and long-term scaling of adaptation impacts. The components will support operational systems for project coordination, procurement, safeguards management, monitoring and evaluation, and learning across all project components.

The component will also strengthen documentation, knowledge management, and dissemination of lessons learned and adaptation good practices. Adaptive management and participatory monitoring systems will enable continuous learning and evidence-based decision-making throughout implementation. The component contributes directly to resilience by ensuring that adaptation investments are implemented effectively, monitored systematically, and scaled strategically to inform future climate adaptation programming in Malawi and beyond.

Executing entity and indicative scale. UNIDO will execute project coordination, safeguards support, monitoring, evaluation, accountability and learning, and knowledge management, while maintaining functional separation from Implementing Entity assurance functions. Targets include one integrated results and safeguards information system; baseline, mid-term, and final evaluations; at least 25 knowledge products; 14 national or district learning events; annual safeguards and gender-performance reporting; and at least 90% of agreed milestones delivered on schedule.

USP status. No unidentified sub-project is envisaged under Component 5. Detailed schedules, procurement packages, and monitoring protocols will be finalized at full proposal stage.

Outcome 5: Effective project delivery, accountability, learning, and long-term scaling of adaptation impacts ensured.

Output 5.1.1 Project coordination, fiduciary management, environmental and social safeguards, and monitoring systems operationalized

Activities

- Establish project coordination, fiduciary management, procurement, and safeguard systems.
- Operationalize environmental and social safeguards frameworks.
- Conduct regular project supervision and implementation reviews.
- Strengthening stakeholder coordination systems.
- Support transparent project governance and reporting.

Output 5.1.2 Knowledge management, learning, and documentation systems established

Activities

- Develop and operationalize knowledge management systems.
- Document lessons learned, case studies, and good practices.
- Establish adaptation learning and knowledge-sharing platforms.
- Support adaptation research and documentation.
- Facilitate cross-learning and exchange visits.

Output 5.1.3 Lessons learned, best practices, and adaptation models disseminated nationally and internationally

Activities

- Organize national and regional knowledge-sharing and dissemination events.
- Publish adaptation knowledge products and technical materials.
- Support adaptation policy dialogue and communication platforms.
- Facilitate international exchange and visibility of adaptation lessons.
- Promote replication and scaling of successful adaptation models.

Output 5.1.4 Monitoring, evaluation, accountability, and learning (MEAL) systems implemented throughout the project lifecycle

Activities

- Develop and operationalize MEAL frameworks and tools.
- Conduct baseline, mid-term, and endline evaluations.
- Establish participatory monitoring and feedback systems.
- Track gender-responsive and climate resilience indicators.
- Conduct adaptive management and learning reviews.

B. Economic, social and environmental benefits

The Malawi Adaptation Resilience for Sustainable Agri-Development (MARESA) Project is designed to generate integrated economic, social, environmental, and institutional benefits for climate-vulnerable communities in Malawi, while ensuring that adaptation interventions are implemented in an inclusive, equitable, gender-responsive, and environmentally sustainable manner. The project specifically targets some of the country's most climate-exposed and socioeconomically vulnerable districts, including Karonga, Machinga, Mangochi, Phalombe, Nsanje, Chikwawa, and the Lower Shire areas of Zomba, where recurrent droughts, floods, cyclones, environmental degradation, weak infrastructure, and chronic poverty continue to undermine livelihoods and adaptive capacity.

The project adopts an integrated climate-adaptation approach grounded in participation, inclusion, equity, accountability, gender responsiveness, environmental sustainability, and community ownership. It prioritizes smallholder farmers, women-headed households, youth, fishing communities, persons with disabilities, older persons, and resource-poor households. The initial gender assessment in Annex II identifies the unequal access to land, finance, information, productive assets, extension services, and decision-making that shapes these groups' vulnerability. Indicative, concept-stage benefits and targets are summarized in Table 3 and will be validated through baseline studies and consultations during full proposal preparation.

Table 3. Indicative Quantified Benefits and Targets

Benefit area	Indicative concept-stage target by project completion
People and inclusion	Approximately 150,000-200,000 direct and indirect beneficiaries; at least 50% women; youth and persons with disabilities reported separately.
Climate-informed planning and early warning	7 district assessments and early warning/advisory systems; at least 35 community risk profiles and adaptation plans; at least 150,000 people covered.
Climate-resilient agriculture and water	30,000 households supported; about 6,000 ha under climate-resilient practices; 20 irrigation/rainwater systems serving about 1,000 ha.
Ecosystems	About 3,000 ha restored or under improved management; 14 nurseries producing at least 700,000 seedlings and planting materials.
Infrastructure and energy	At least 21 decentralized renewable-energy systems and 21 other priority climate-resilient facilities or protection works; at least 20% lower post-harvest losses at supported facilities.
Enterprises, jobs, and finance	120 MSMEs/cooperatives supported; 300 jobs created or strengthened; at least USD 1 million additional finance mobilized or committed; at least 60% of supported enterprises women- or youth-led.
Knowledge and institutions	At least 1,400 people trained; 7 district plans strengthened; 25 knowledge products; 14 learning events; 5 adaptation models documented for replication.

Economic Benefits

The project will generate substantial economic benefits by strengthening climate-resilient livelihoods, improving agricultural productivity, reducing climate-related economic losses, and supporting diversification of local economies. Climate-smart agriculture interventions, irrigation systems, agroforestry, and sustainable land management practices will improve crop productivity, reduce vulnerability to droughts and floods, and enhance food security among vulnerable households. Improved irrigation and water harvesting systems will reduce dependence on erratic rainfall and enable year-round agricultural production, thereby increasing household incomes and livelihood stability.

The deployment of decentralized renewable energy systems and climate-resilient storage facilities will reduce post-harvest losses, improve market access, and support value addition for agricultural products. Solar-powered irrigation, cold storage, agro-processing, and productive-use energy systems will strengthen local enterprises and create new economic opportunities, particularly for women and youth. The project will also support climate-responsive MSMEs, community enterprises, and adaptation-focused businesses through technical assistance, climate finance linkages, revolving funds, and entrepreneurship support systems. These interventions are expected to stimulate local economic development, strengthen the resilience of rural markets, and reduce economic disruptions associated with climate shocks.

At the broader economic level, the project will contribute to reducing climate-induced losses associated with crop failures, ecosystem degradation, floods, and droughts, which currently impose significant economic burdens on Malawi's economy. By strengthening adaptive capacity and reducing disaster risks, the project will contribute to more stable local production systems, improved rural livelihoods, and long-term economic resilience.

Social Benefits

The project will generate major social benefits through improved food security, strengthened adaptive capacity, enhanced access to climate information, improved water security, better access to energy services, strengthened local governance systems, and increased participation of vulnerable groups in climate adaptation decision-making. The project places strong emphasis on inclusive and participatory planning processes to ensure that vulnerable populations are actively engaged in adaptation planning, implementation, monitoring, and governance systems.

Improved access to climate information and early warning systems will enhance community preparedness for floods, droughts, storms, and other climate hazards, thereby reducing loss of lives, assets, and livelihoods.

Community adaptation planning and climate literacy programs will improve local knowledge and strengthen community capacities to anticipate and respond to climate risks. Strengthened water supply systems, irrigation systems, and ecosystem restoration activities will improve access to water resources for domestic use, agriculture, and livelihoods, particularly in drought-prone communities.

The project also promotes social inclusion and community empowerment by strengthening local adaptation committees, participatory governance systems, grievance mechanisms, and accountability structures. Women, youth, persons with disabilities, and marginalized groups will be intentionally represented within local governance and adaptation planning structures to ensure equitable participation and access to project benefits. Capacity-building activities targeting women's groups, youth associations, cooperatives, and local institutions will further strengthen local ownership and sustainability of adaptation interventions.

The project is also expected to contribute indirectly to improved nutrition, health, and social stability by strengthening food security, reducing livelihood vulnerability, and improving resilience to climate-induced disasters. Reduced dependence on biomass energy through renewable energy systems may also improve household health outcomes by reducing indoor air pollution and pressure on natural forests.

Environmental Benefits

The project will generate substantial environmental benefits through integrated ecosystem restoration, sustainable land management, climate-smart agriculture, watershed rehabilitation, reforestation, renewable energy deployment, and climate-resilient infrastructure development. Malawi faces severe environmental degradation driven by deforestation, unsustainable agricultural expansion, soil erosion, overdependence on biomass energy, and degradation of watersheds and aquatic ecosystems (Government of Malawi, 2021). These environmental pressures are further exacerbated by climate change and recurrent extreme weather events.

The project will support restoration of degraded landscapes, watersheds, riverbanks, and catchment areas through reforestation, assisted natural regeneration, agroforestry, erosion control, and sustainable land management interventions. These activities will strengthen ecosystem resilience, improve water retention, reduce soil erosion, restore biodiversity functions, and enhance carbon sequestration. Agroforestry systems and climate-smart agriculture practices will contribute to improved soil fertility, reduced land degradation, and increased resilience of farming systems.

The deployment of decentralized renewable energy systems, including solar-powered irrigation and productive-use energy systems, will reduce dependence on biomass energy and contribute to reduced deforestation and environmental degradation. Improved watershed management and ecosystem restoration interventions will also contribute to improved hydrological regulation, reduced flood risks, and enhanced resilience of water systems and ecosystem services.

The project's integrated Water-Energy-Food (WEF) nexus approach ensures that environmental sustainability is embedded across all interventions. Climate-resilient infrastructure investments will incorporate sustainability and resilience standards to minimize environmental risks while strengthening long-term adaptive capacity.

Gender Equality and Inclusion Considerations

Gender equality and social inclusion are central to MARESA's design. As documented in the initial gender assessment in Annex II, women and girls face unequal access to productive resources, land, agricultural inputs, climate information, finance, extension services, leadership, and decision-making, while climate shocks increase unpaid care burdens and livelihood insecurity. The project will use sex- and age-disaggregated data and monitor the participation and benefits of persons with disabilities and other nationally defined vulnerable groups.

The project will apply a comprehensive gender-responsive adaptation approach that is fully aligned with the Adaptation Fund Gender Policy as well as Malawi's national gender and climate policy frameworks, recognizing that women and girls are disproportionately affected by climate change due to unequal access to resources, services, decision-making, and adaptive capacities. The project will therefore ensure the

meaningful and active participation of women in climate adaptation planning, community governance structures, and local decision-making processes, enabling them to influence priorities, investments, and implementation strategies. Targeted interventions will support women-led climate adaptation enterprises and diversified livelihood initiatives, including climate-smart agriculture, renewable energy services, natural resource restoration, value addition, and small-scale green businesses, thereby strengthening household resilience and economic empowerment. The project will also prioritize women's access to climate finance mechanisms, grants, revolving funds, productive assets, and adaptation technologies, addressing structural barriers that often limit women's financial inclusion and investment opportunities. In addition, women and girls will benefit from improved access to climate information services, early warning systems, technical training, leadership development, and capacity-building programs designed to enhance adaptive knowledge and resilience. Gender-sensitive monitoring and evaluation systems will be integrated throughout project implementation, including the use of sex-disaggregated data, gender-responsive indicators, and periodic assessments to measure equitable outcomes and identify gaps. The project will further promote transparent and equitable benefit-sharing mechanisms to ensure that adaptation benefits reach women, youth, and other vulnerable groups fairly and inclusively. At the institutional level, the project will strengthen the capacities of government agencies, local authorities, community institutions, and implementing partners to mainstream gender considerations into climate adaptation planning, budgeting, implementation, and monitoring, thereby contributing to long-term inclusive, equitable, and climate-resilient development in Malawi.

Youth, persons with disabilities, elderly populations, and marginalized households will also receive targeted support through inclusive participation mechanisms, tailored capacity-building programs, and equitable access to project resources and services. The project will ensure that adaptation investments do not exacerbate existing inequalities or social exclusion.

Compliance with the Adaptation Fund Environmental and Social Policy

The project will fully comply with the Adaptation Fund Environmental and Social Policy (ESP) and Gender Policy throughout the project lifecycle. Environmental and social safeguards will be integrated into project design, implementation, monitoring, and evaluation processes to ensure that adaptation interventions avoid, minimize, and mitigate potential adverse environmental and social impacts while maximizing positive benefits.

During full proposal preparation, UNIDO and MoAIWD will complete the Environmental and Social Management Framework (ESMF), a project-level Environmental and Social Management Plan (ESMP) that includes the procedures required for partially unidentified sub-projects, the comprehensive gender assessment and Gender Action Plan (GAP), the Stakeholder Engagement Plan, and the project Grievance Redress Mechanism. Environmental and Social Impact Assessments (ESIAs) and site-specific ESMPs will also be prepared at full proposal stage for locations and designs known at that time. For any residual site or sub-project identified during implementation, screening and any required ESIA, ESMP, permits, consultations, and gender-responsive measures will be completed, disclosed where required, and approved before tender, grant award, construction, or other physical implementation. The ESMF, ESMP, and GAP will be implemented, monitored, and updated throughout the project lifecycle.

Potential environmental and social risks associated with infrastructure development, irrigation systems, renewable energy installations, and ecosystem restoration activities may include localized land disturbance, vegetation clearing, soil erosion, temporary disruption of livelihoods, occupational health and safety risks, and potential exclusion of vulnerable groups if safeguards are not adequately implemented. These risks are expected to be moderate, site-specific, manageable, and largely reversible through appropriate mitigation measures.

The project will apply a comprehensive set of environmental and social safeguards and mitigation measures to ensure that all interventions are environmentally sustainable, socially inclusive, and fully aligned with the Environmental and Social Policy requirements of the Adaptation Fund and national regulatory frameworks. All subprojects and infrastructure investments will undergo rigorous environmental and social screening prior to implementation in order to identify potential risks and define appropriate mitigation measures. The project will avoid activities that could result in involuntary resettlement, significant ecosystem degradation, biodiversity

loss, or other major adverse environmental and social impacts, while prioritizing the use of degraded lands and already modified sites for infrastructure development to minimize pressure on natural ecosystems. Sustainable construction approaches, climate-resilient technologies, and ecosystem restoration practices will be applied throughout implementation to enhance long-term environmental integrity and resilience benefits. Where required, site-specific Environmental and Social Management Plans (ESMPs) will be prepared and implemented to guide risk mitigation, monitoring, and compliance. The project will also ensure free, prior, and informed consultations with stakeholders, including women, youth, vulnerable groups, and local communities, to promote meaningful participation and inclusive adaptation processes. Accessible and transparent grievance redress mechanisms will be established at community and district levels to address complaints and concerns in a timely and equitable manner. In addition, strong occupational health and safety measures will be enforced to protect workers and surrounding communities during project implementation. Gender equality, disability inclusion, and broader social inclusion principles will be mainstreamed across all project activities, ensuring equitable access to project benefits and decision-making processes. Safeguard compliance will be continuously monitored through regular supervision, reporting, environmental and social audits, and adaptive management reviews to ensure that emerging risks are effectively addressed and that project interventions remain socially acceptable, environmentally sound, and climate resilient throughout the implementation period.

The project will not support activities involving forced displacement, conversion of critical natural habitats, large-scale infrastructure with significant environmental risks, or interventions that negatively affect vulnerable groups or local livelihoods. Community participation, transparency, accountability, and social inclusion principles will guide all adaptation investments and implementation processes.

Through these integrated safeguards and inclusive adaptation measures, the MARESA project will strengthen climate resilience while ensuring that environmental sustainability, social equity, gender equality, and protection of vulnerable populations remain central to project implementation and long-term adaptation outcomes.

C. Cost-effectiveness of the project

The project is a cost-effective adaptation investment because it uses a USD 10 million grant to address several connected drivers of climate vulnerability at the same time: rain-fed agriculture, weak irrigation coverage, post-harvest losses, ecosystem degradation, limited climate information, low rural energy access, weak local institutions, and limited access to climate finance. The project design combines governance, climate-smart agriculture, irrigation, ecosystem restoration, resilient infrastructure, decentralized renewable energy, MSME support, learning, and monitoring under one integrated Water-Energy-Food (WEF) nexus approach. This integrated design reduces duplication, lowers transaction costs, and increases resilience benefits across sectors and communities.

The project is particularly justified because Malawi already loses substantial economic value from climate-related disasters. Malawi's NAP Framework states that the country loses an average of 1.7 percent of GDP each year from climate-related disasters, with floods in the Shire River Basin causing average annual losses of 0.7 percent of GDP and drought causing average annual losses of 1 percent of GDP elsewhere in the country (Government of Malawi, 2020). The 2015 floods, for example, caused economic losses estimated at USD 335 million, demonstrating that the cost of recovery after disasters can exceed the value of preventive adaptation investments. The project investment is therefore small relative to the recurrent and rising cost of climate inaction.

1. Comparison with Business as Usual or No Adaptation Scenario

Under a business-as-usual scenario, the target districts would continue to face repeated losses from droughts, floods, tropical storms, land degradation, food insecurity, weak market access, poor storage, and low access to energy. Malawi's economy is highly dependent on agriculture, where smallholder farmers operate almost entirely under rain-fed conditions, and where only about 4 percent of cultivated land is under irrigation. This makes household income, food security, and national economic performance highly sensitive to rainfall variability.

Without the project, adaptation responses would remain fragmented, reactive, and more expensive over time. Communities would continue to depend on humanitarian assistance after shocks, while public resources would be repeatedly diverted to disaster response rather than resilience building. Previous shocks have repeatedly increased food insecurity and humanitarian caseloads, with severe effects on rural households, women, youth, and people living with disabilities.

With the project, it shifts investment from repeated recovery to prevention, preparedness, and productive adaptation. It reduces climate sensitivity by improving irrigation, restoring ecosystems, strengthening early warning systems, improving storage and value addition, and building local enterprise capacity. Investments in irrigation, water harvesting, climate-smart agriculture, ecosystem restoration, early warning systems, climate information, storage facilities and renewable energy reduce the likelihood that droughts, floods and rainfall variability will translate into total livelihood collapse. This produces avoided losses, improved productivity, reduced post-harvest losses, and more durable resilience outcomes. The project therefore shifts public spending away from emergency response toward risk reduction, productivity stabilization and long-term resilience. This is consistent with the NAP Framework, which emphasizes building adaptive capacity, integrating adaptation into development planning, strengthening local ownership and supporting vulnerable communities.

2. Cost Effectiveness of Key Interventions

The project's integrated and inclusive adaptation planning approach is cost-effective because it improves the targeting of investments before physical works are undertaken. Participatory climate risk assessments, Water-Energy-Food (WEF) nexus planning, grievance systems, and community adaptation plans reduce the risk of misallocation, duplication, elite capture, and weak ownership. These governance investments are relatively low cost but improve the efficiency and sustainability of all subsequent interventions.

Climate-smart agriculture, irrigation, and ecosystem restoration are cost effective because they address the root causes of recurring agricultural losses. The agriculture and irrigation investments are cost effective because they address the largest source of climate vulnerability in Malawi. Agriculture employs most rural households and remains heavily dependent on rainfall. Most smallholder agriculture is rain fed. Only a portion of potential irrigable land is irrigated. Droughts, land degradation, pests, diseases, expensive inputs, limited finance and market constraints are key drivers of low productivity. There are large gaps between actual and potential yields, including 32 percent for maize, 43 percent for groundnuts, 28 percent for soybeans, and 26 percent for common beans. By financing climate-smart agriculture, irrigation, soil and water conservation, agroforestry and farmer field-based learning, the project directly targets the factors that reduce productivity and increase vulnerability.

The project also improves cost effectiveness through ecosystem-based adaptation. Soil erosion, land degradation and deforestation impose major economic costs on Malawi's agricultural sector. Severe soil loss from cropland is estimated at 29 tonnes per hectare per year. Land degradation has reduced arable land and contributed to reduced agricultural productivity. The project's watershed restoration, agroforestry, assisted natural regeneration and soil conservation activities generate long lasting benefits with relatively low maintenance costs. These measures improve water infiltration, reduce runoff, stabilize soils, reduce flood impacts, enhance soil fertility and support biodiversity. In this way, the project protects agricultural investments while also reducing future restoration and disaster recovery costs.

Climate resilient infrastructure and decentralized renewable energy systems are cost effective because they reduce losses across the value chain. Solar powered irrigation, cold storage, agro-processing, and renewable energy supported-storage reduce dependence on rainfall, lower post-harvest losses, and increase income from additional value. Renewable energy and agro-development highlight that post-harvest losses for major staples such as maize, rice, and ground nuts are estimated at 17 to 30 percent and are worsened by poor storage, erratic rainfall, floods, and limited energy access. Renewable energy powered irrigation, cold storage and processing reduce operating costs over time, reduce dependence on biomass and diesel, and support productive use of energy. These investments generate adaptation benefits by increasing water availability, reducing spoilage, improving market timing and supporting local value chains.

The project further improves efficiency by investing in community-based planning and institutional strengthening. These are relatively low-cost activities, but they improve targeting, reduce duplication, increase community ownership and strengthen sustainability. Cost effectiveness improves when adaptation interventions are selected through multi-criteria analysis that considers technical feasibility, cost, social benefits, climate risk reduction, accessibility for small farmers, flexibility and transformative potential. The project applies this principle by using participatory climate risk and Water, Energy and Food assessments, community adaptation planning, inclusive governance platforms and localized climate information systems to ensure that investments match local vulnerability profiles.

The project also provides good value for money through its delivery model. It builds on existing government structures, district systems, community institutions, farmer groups, MSMEs and extension platforms rather than creating parallel implementation structures. Implementation through existing institutions, farmer organizations, lead farmers, and group-based extension is more efficient than reliance on international expert driven systems, because it reduces operational costs and leaves skills within communities. The project follows this logic by strengthening district and community systems that will continue supporting adaptation after project closure.

The climate finance and MSME component increase cost effectiveness by creating a pathway for continuation and scaling beyond the grant period. By linking local MSMEs, cooperatives and adaptation enterprises with financial institutions, climate finance opportunities and business development services, the project reduces dependence on public grants over time. It also supports job creation, income diversification and local service delivery in areas such as irrigation maintenance, renewable energy operation, nursery management, agro-processing, storage management and climate resilient value chains. This helps transform one time grant financing into a broader local adaptation economy.

3. Durability and Efficiency of Investments

The project prioritizes investments with benefits that continue beyond the project implementation period. Ecosystem restoration, agroforestry, watershed rehabilitation, and soil water conservation provide long lasting benefits through improved water infiltration, reduced erosion, improved soil fertility, increased tree cover, and reduced flood and drought sensitivity. These nature-based solutions generally require lower recurrent costs than large engineered infrastructure, while delivering multiple benefits for agriculture, water, biodiversity, and disaster risk reduction.

Infrastructure investments are also designed for durability. Irrigation systems, water harvesting structures, storage facilities, and renewable energy systems will be combined with community management systems, maintenance funds, local technical training, and institutional support. This reduces the risk of abandoned infrastructure and improves the useful life of assets.

The project also strengthens institutional durability. The NAP Framework emphasizes that Malawi's adaptation process should integrate climate change into national and subnational planning, build capacity, strengthen coordination, and establish systems for monitoring and review (Government of Malawi, 2020). MARESA directly operationalizes this approach through district planning, community committees, knowledge management, monitoring, and learning systems.

4. Cost per Beneficiary

The project has a total financing request of USD 10 million. The project will directly and indirectly benefit approximately 150,000 to 200,000 people across targeted districts. Based on this estimate, the indicative cost per beneficiary would be around USD 50 to USD 70 per person.

This cost per beneficiary is reasonable for a multi component adaptation project that combines local planning, climate information, irrigation, agriculture, renewable energy, storage, ecosystem restoration, MSME finance, safeguards, monitoring, and learning. The value for money is strengthened by the fact that benefits are not limited to one sector. A single investment package improves food security, household income, local enterprise development, water security, energy access, ecosystem services, disaster preparedness, gender inclusion, and institutional capacity.

Overall, the project is cost-effective because it shifts Malawi's vulnerable communities from repeated responses to climate shocks toward planned, integrated, and productive climate adaptation. Compared with the business-as-usual scenario, the project offers better value for money by reducing future disaster losses, increasing agricultural productivity, reducing post-harvest losses, restoring ecosystems, strengthening local institutions, and expanding adaptation finance.

D. Consistency with National and Sub-National Sustainable Development Strategies in Malawi

Table 4 shows how MARESA translates Malawi's principal development, climate, agriculture, water, energy, and disaster-risk priorities into locally implemented adaptation actions. Dates are included in the instrument titles for clarity.

Table 4. Consistency with National and Sub-National Strategies

Plan, policy, or strategy (date)	Primary focus/objective	Relevant MARESA interventions and outputs
Malawi 2063 (2020)	Inclusive wealth, agricultural productivity, industrialization, resilient infrastructure, and environmental sustainability.	Climate-resilient agriculture and irrigation; renewable-energy productive uses; MSMEs, value addition, and inclusive local governance (Components 2-4).
National Adaptation Plan Framework (2020)	Mainstream adaptation in sectoral and district planning and build resilient people, ecosystems, and infrastructure.	Community adaptation plans, district integration, ecosystem restoration, climate information, resilient infrastructure, and capacity development (Components 1-5).
Nationally Determined Contributions 3.0 (2026)	Adaptation priorities for agriculture, water, ecosystems, infrastructure, energy, early warning, and vulnerable groups.	All components, especially early warning, climate-smart agriculture, water systems, restoration, renewable energy, and gender-responsive adaptation.
National Climate Change Management Policy (2016)	Coordinate adaptation, capacity development, technology transfer, climate finance, and cross-cutting gender action.	Locally led planning, climate technology, finance mechanisms, institutional coordination, learning, and gender mainstreaming (Components 1, 3-5).
National Agriculture Policy (2016)	Sustainable productivity, irrigation, commercialization, resilience, and stronger agricultural value chains.	Drought-resilient crops, conservation agriculture, irrigation, post-harvest systems, extension, and adaptation enterprises (Components 2-4).
National Energy Policy (2018)	Affordable, reliable, sustainable energy access and increased renewable-energy use.	Solar irrigation, cold storage, water supply, agro-processing, and decentralized energy for adaptation functions (Component 3).
Revised National Water Policy (2023)	Sustainable, equitable water resources and services, water security, catchment management, and sector coordination.	Water harvesting, efficient irrigation, watershed restoration, water governance, water-quality protection, and WEF coordination (Components 1-3).
National Framework for Water and Climate Services (2024)	Improve observations, climate services, early warning, user engagement, research, and climate literacy.	Localized risk information, district/community warning and advisory systems, user training, and climate-knowledge platforms (Components 1 and 5).
Disaster Risk Management Act (2023) and National Disaster Risk Management Policy (2015)	Shift from reactive response to prevention, preparedness, risk reduction, and resilient recovery.	Multi-hazard risk assessments, warnings, contingency-informed adaptation plans, flood/drought protection, and resilient infrastructure (Components 1 and 3).

E. Applicable National Technical Standards and Compliance Arrangements

Table 5 summarizes the principal national legislation, policies, and technical standards likely to apply. During full proposal preparation, the responsible technical authority will confirm the current edition of every standard and any district by-law applicable to each selected site. Compliance costs will be included in designs, procurement documents, contracts, supervision, and operations plans.

Table 5. Applicable National Technical Standards and Compliance Arrangements

National requirement or standard (date)	Project interventions/activities	Arrangements to ensure compliance
Environment Management Act (2017) and national EIA Guidelines (1997)	All physical works, irrigation, energy, restoration, storage, processing, and enterprise sub-projects.	Screen all activities; obtain Malawi Environmental Protection Authority determinations and approvals; prepare ESIA/ESMPs where required; include mitigation, monitoring, disclosure, and grievance requirements in contracts.
Water Resources Act (2013) and Revised National Water Policy (2023)	Water abstraction, irrigation, harvesting, storage, watershed works, and water supply.	Undertake water-balance and downstream-use assessment; secure abstraction/construction permits; protect environmental flows and water quality; establish user-management and conflict-resolution arrangements.
Irrigation Act (2024) and applicable MoAIWD irrigation design manuals	New or rehabilitated drip, sprinkler, solar-pumped, and community irrigation schemes.	Qualified engineers prepare feasibility and designs; MoAIWD technical review and approval; climate-risk and dam/safety screening where relevant; commissioning and O&M plans before handover.
Malawi Standard MS 214:2013 (drinking-	Community water systems, storage, processing,	Baseline and periodic accredited water-quality testing; sanitary protection;

National requirement or standard (date)	Project interventions/activities	Arrangements to ensure compliance
water quality) and MS 733:2005 (borehole/shallow-well water quality), where applicable	and any potable-water interface.	treatment where needed; monitoring records; corrective-action thresholds and responsible operator identified.
National Construction Industry Act (1996) and Malawi Construction Industry Act (2025), applicable Malawi building standards, and district building-control by-laws	Storage, markets, processing facilities, drainage, flood protection, and other civil works.	Use registered professionals and contractors; obtain building approvals; apply climate design loads and accessibility requirements; independent supervision, inspection, certification, and defect-liability provisions.
Energy Regulation Act (2004 including as amended in 2025), Electricity Act (2004 including as amended in 2024), National Energy Policy (2018), and applicable Malawi Bureau of Standards electrical/solar standards	Solar pumping, mini-grid/off-grid systems, cold storage, and agro-processing energy systems.	Use licensed providers and certified equipment; electrical safety and commissioning tests; user training; maintenance contracts; battery/e-waste take-back and disposal plans.
Occupational Safety, Health and Welfare Act (1997 including as amended in 2014)	Construction, installation, agro-processing, nurseries, restoration, and operation of productive assets.	Contractor OHS plans, risk assessments, personal protective equipment, incident reporting, worker grievance channels, community safety plans, and supervision audits.
Land Act (2016) and Customary Land Act (2016)	Land access for infrastructure, irrigation, nurseries, restoration, and community assets.	Verify tenure and voluntary land agreements; avoid physical/economic displacement; document consultations and consent; screen access restrictions; exclude activities requiring involuntary resettlement.
Forestry Act (1997, including as amended in 2025) and applicable forestry regulations	Reforestation, assisted natural regeneration, agroforestry, nurseries, riverbank and watershed restoration.	Use approved species and management plans; protect natural habitats; obtain permits where required; prevent invasive species; agree community stewardship and benefit-sharing arrangements.
Local Government Act (1998 including as amended in 2010 and 2017) and district development/building by-laws	All district- and community-level investments.	Integrate activities into district plans; obtain council approvals; use district technical committees for screening and supervision; disclose investments and maintain community feedback mechanisms.

F. Duplication and Complementarity with Other Funding Sources

The proposed Malawi Adaptation Resilience for Sustainable Agri-Development (MARESA) project has been designed to complement, strengthen, and scale ongoing climate adaptation, agricultural development, ecosystem restoration, renewable energy, and resilience-building initiatives in Malawi rather than duplicate them. During project preparation, a review of ongoing and recently completed programmes financed by the Government of Malawi, multilateral development banks, United Nations agencies, climate funds, bilateral partners, and development organizations was undertaken to identify adaptation gaps, lessons learned, and opportunities for synergy.

The assessment confirmed that although Malawi is implementing several important climate resilience and rural development initiatives, substantial adaptation gaps remain, particularly in highly climate-vulnerable districts affected by recurrent droughts, floods, ecosystem degradation, weak infrastructure, limited irrigation coverage, low rural energy access, inadequate post-harvest systems, and limited adaptation financing for vulnerable groups. Existing interventions are often geographically limited, sector-specific, or insufficiently integrated to address interconnected Water-Energy-Food (WEF) nexus challenges.

MARESA addresses these gaps through an integrated, community-based, and multi-sectoral adaptation approach that combines climate-resilient agriculture, watershed restoration, renewable energy systems, resilient livelihoods, climate information services, post-harvest management, adaptation-oriented MSMEs, and decentralized adaptation governance systems. The project focuses on underserved and highly climate-vulnerable districts where adaptation needs remain significant despite ongoing investments. The project has been deliberately designed to avoid duplication by building on existing investments, coordinating with national and district planning systems, and focusing on complementary adaptation interventions and underserved geographic areas. The table below summarizes key ongoing and pipeline initiatives relevant to the project and highlights how MARESA will strengthen synergies, reinforce existing investments, and address critical adaptation gaps without duplicating ongoing interventions.

Table 6. Complementarity and Synergy with Other Funding Sources and Projects

Project	Main Interventions / Objectives	Timeline / Duration	Target Locations & Beneficiaries	Synergy and Complementarity with MARESA / No Duplication
Shire Valley Transformation Program (SVTP) – Government of Malawi / World	Strengthen climate-resilient irrigation development, integrated water resource management,	2017–2031 (USD 520M)	Shire Valley and surrounding districts in southern Malawi targeting smallholder	MARESA will build on investments under SVTP by strengthening community-level adaptation and livelihood resilience systems linked to water, agriculture, and ecosystems. While SVTP prioritizes large-scale irrigation and water infrastructure, MARESA focuses on localized Water-Energy-Food (WEF) nexus adaptation,

Project	Main Interventions / Objectives	Timeline / Duration	Target Locations & Beneficiaries	Synergy and Complementarity with MARESA / No Duplication
Bank and Development Partners	agricultural commercialization, flood risk management, and livelihood resilience.		farmers, irrigation schemes, and vulnerable rural communities.	ecosystem restoration, and community-based resilience planning, thereby avoiding duplication of major infrastructure investments.
Championing Local Adaptation for Productive Ecosystems and Enhanced Resilience (CLAP for Resilience) – UNDP/GCF	Strengthen community-based climate adaptation, ecosystem resilience, climate-resilient livelihoods, and community adaptation planning through integrated adaptation interventions.	2026–2033 (USD 8.9M)	Climate-vulnerable districts and rural communities in Malawi, particularly smallholder farmers, women, youth, and ecosystem-dependent populations.	MARESA will generate strong synergies with CLAP for Resilience through shared priorities on community-based adaptation and ecosystem resilience. While CLAP focuses on community adaptation planning and ecosystem resilience, MARESA expands support to climate-resilient irrigation, renewable energy systems, resilient livelihoods, and adaptation-focused MSMEs, ensuring complementary rather than overlapping investments.
Restoring Landscapes and Livelihoods in Malawi – CAM & GEA	Restore degraded landscapes, strengthen ecosystem services, support regenerative agriculture, and improve nature-based livelihoods.	2022–2027 (USD 17.5M)	Degraded landscapes and vulnerable rural communities in Malawi.	MARESA will reinforce ongoing landscape restoration efforts by linking restored ecosystems with broader climate adaptation and livelihood resilience systems. Whereas CAM & GEA focuses primarily on regenerative land management and ecosystem restoration, MARESA adds value through climate-resilient agriculture, watershed rehabilitation, renewable energy systems, and adaptation-oriented livelihood diversification.
Adapting to Climate Change Through Integrated Risk Management Strategies and Enhanced Market Opportunities for Resilient Food Security and Livelihoods – WFP / Adaptation Fund	Strengthen food security, climate resilience, integrated risk management systems, and market opportunities for vulnerable populations through climate-resilient livelihood interventions.	11 June 2020-15 October 2025 (revised completion; USD 9.989M)	Climate-vulnerable households and food insecure communities in Malawi.	MARESA will strengthen resilience outcomes for vulnerable households through complementary adaptation investments. While the WFP-led initiative focuses on food security, integrated risk management, and market access, MARESA broadens support to include Water-Energy-Food (WEF) nexus systems, ecosystem restoration, renewable energy applications, climate-resilient irrigation, and adaptation-focused MSMEs.
Smallholder Climate Resilience Project (SCRIP) – IFAD / Adaptation Fund	Strengthen climate resilience of smallholder farmers through climate-smart agriculture, community adaptation planning, climate-responsive livelihood investments, and improved adaptive capacities in vulnerable rural areas.	Approved 10 April 2026; implementation dates to be confirmed (USD 20M)	Smallholder farmers and climate-vulnerable rural communities in Malawi, implemented through the Ministry of Agriculture.	MARESA will build on community-based adaptation approaches and climate-smart agriculture investments supported under SCRIP. Unlike SCRIP, MARESA expands into integrated Water-Energy-Food (WEF) nexus systems, renewable energy applications, climate-resilient infrastructure, resilient post-harvest systems, and adaptation-oriented MSMEs, thereby strengthening broader productive resilience systems without duplicating planned activities.
FP238 – Ecosystems-based Adaptation for Resilient Watersheds and Communities (EbAM) – FAO/GCF	Strengthen watershed management, restore ecosystem services, promote ecosystem-based adaptation, and improve climate-resilient livelihoods.	18 July 2024-23 July 2030 (estimated completion)	Watershed landscapes and climate-vulnerable communities in Malawi.	MARESA aligns closely with ongoing ecosystem-based adaptation investments under EbAM and will strengthen the integration of watershed restoration into productive livelihood systems. While EbAM focuses primarily on ecosystem restoration and watershed resilience, MARESA expands adaptation benefits through climate-resilient agriculture, irrigation systems, renewable energy applications, and adaptation-oriented enterprises.
Malawi Watershed Services Improvement Project (MWASIP) – World Bank Group	Strengthen integrated watershed management, landscape restoration, catchment rehabilitation, and community resilience to climate variability and land degradation.	2020–2026 (USD 78.5M)	Priority watersheds and climate-vulnerable rural communities across Malawi, including smallholder farmers and ecosystem-dependent populations.	MARESA will strengthen adaptation outcomes linked to watershed restoration and landscape resilience investments supported under MWASIP. While MWASIP emphasizes watershed rehabilitation and ecosystem management, MARESA focuses on climate-resilient agriculture, renewable energy systems, adaptation-oriented enterprises, and decentralized adaptation governance, ensuring clear complementarity and no duplication of restoration investments.

Project	Main Interventions / Objectives	Timeline / Duration	Target Locations & Beneficiaries	Synergy and Complementarity with MARESA / No Duplication
SADC Regional Climate Resilient Water Investment Programme (SADC-AIP)	Strengthen regional climate-resilient water security, hydrological systems, Water-Energy-Food (WEF) nexus planning, and drought and flood resilience.	2020–2035	SADC member states including Malawi targeting vulnerable water systems and climate-affected populations.	MARESA will operationalize regional Water-Energy-Food (WEF) nexus priorities and climate-resilient water investments at district and community levels in Malawi. While SADC-AIP focuses on regional water resilience systems and investment planning, MARESA translates those priorities into localized irrigation, watershed restoration, and resilient livelihood actions.
Regional Climate Resilience Program for Eastern and Southern Africa (RCRP-2)	Support climate resilience infrastructure, water resource management, resilience planning, and institutional strengthening.	2022–2030	Eastern and Southern African countries including Malawi targeting climate-vulnerable communities and institutions.	MARESA contributes to the broader objectives of RCRP-2 by translating regional resilience priorities into community-based adaptation actions and integrated livelihood resilience systems within Malawi. Synergies will be created through knowledge sharing, institutional coordination, and strengthened community-level adaptation systems.
SADC Climate Resilient Systems for the Water Sector (SADC-HYCOS IV / AIP)	Strengthen regional hydrological observation systems, climate information services, water security, and multi-hazard early warning systems.	2021–2030	SADC region including Malawi targeting national hydrological systems and climate-vulnerable populations.	MARESA enhances the practical application of regional climate and hydrological information systems within localized adaptation planning and community resilience-building activities. The project therefore adds downstream adaptation value to regional observation and early warning investments without duplicating hydrological infrastructure systems.

Sources for updated dates: Adaptation Fund project records for the WFP project and the Smallholder Climate Resilience Project; Green Climate Fund project record for FP238 (accessed August 2026). Coordination protocols and geographic overlap checks will be finalized during full proposal preparation.

G. Learning and knowledge management

The project includes a strong learning and knowledge management component designed to systematically capture, analyze, document, disseminate, and scale lessons learned and good practices emerging from project implementation. Given the increasing climate vulnerability of Malawi and the urgent need for scalable and community-based adaptation solutions, the project recognizes that continuous learning, adaptive management, and knowledge sharing are essential for improving resilience outcomes, strengthening institutional capacities, and informing future climate adaptation investments and policies. The project therefore places knowledge generation and evidence-based learning at the center of implementation to support replication, scaling, and long-term sustainability of successful adaptation approaches.

The learning and knowledge management system will support continuous documentation of practical experiences, innovations, adaptation technologies, governance approaches, and implementation lessons generated across all project components. This will include lessons related to climate-smart agriculture, irrigation systems, watershed restoration, renewable energy systems, post-harvest management, climate information services, community-based adaptation planning, MSME support, and inclusive adaptation governance. The project will establish a structured Monitoring, Evaluation, Accountability, and Learning (MEAL) framework that integrates participatory monitoring systems, community feedback mechanisms, gender responsive indicators, and adaptive management processes. Lessons learned and implementation experiences will be regularly analyzed to improve project delivery and strengthen decision making throughout implementation.

The project will place strong emphasis on community-based learning and peer-to-peer knowledge exchange to ensure that adaptation knowledge is accessible, practical, and locally relevant. Farmer field schools, demonstration sites, exchange visits, adaptation learning platforms, and community knowledge sharing forums will be used to facilitate learning among farmers, women's groups, youth associations, cooperatives, local enterprises, extension agents, and district institutions. Demonstration plots and pilot adaptation investments will serve as practical learning laboratories for climate resilient agriculture, ecosystem restoration, renewable energy systems, and resilient value chain development. These approaches will strengthen local ownership, increase adoption of resilient practices, and support scaling of successful adaptation models across neighboring communities and districts.

At institutional level, the project will strengthen knowledge management capacities among district councils, government agencies, technical institutions, civil society organizations, and implementing partners. The project will facilitate multi stakeholder learning platforms and technical exchange forums to promote

coordination, policy dialogue, and cross sectoral learning on climate adaptation and Water-Energy-Food (WEF) nexus approaches. Knowledge products, including technical guidelines, policy briefs, case studies, lessons learned reports, adaptation manuals, training materials, audiovisual materials, and best practice documentation, will be developed and disseminated at local, district, national, and regional levels. These products will support the integration of successful adaptation approaches into district planning systems, sectoral programs, and national adaptation processes.

The project will also contribute to national and regional climate adaptation learning agendas by generating evidence and practical experiences that can inform future adaptation programming in Malawi and Southern Africa. Collaboration with national institutions, universities, meteorological agencies, research organizations, and development partners will support wider dissemination and uptake of project knowledge. Lessons from the project will contribute to the implementation of Malawi's National Adaptation Plan (NAP), Nationally Determined Contribution (NDC), and climate resilient development priorities. The project will also share adaptation experiences and innovations through national climate adaptation platforms, regional forums, and relevant international knowledge networks supported by the Adaptation Fund and other climate finance institutions.

Digital knowledge management and climate information systems will also be promoted to improve accessibility, transparency, and long-term retention of project knowledge and lessons. The project will support the development of databases, climate information platforms, monitoring dashboards, and digital communication tools to facilitate real time learning, reporting, and dissemination of adaptation experiences. Community feedback systems and participatory learning mechanisms will further strengthen accountability and responsiveness to local priorities and emerging climate risks. Through these integrated learning and knowledge management systems, the project will not only strengthen implementation effectiveness and sustainability but also contribute to broader national and regional efforts to build resilient communities, resilient ecosystems, and climate-informed development systems.

H. Consultative process

District and community-level field consultations were conducted across all seven MARESA target districts between 27–31 August 2026. The exercise comprised 45 completed Key Informant Interviews (KIIs) with district council technical officers, disaster risk management authorities, meteorological services, forestry, water, agriculture, environmental health, and education officials, together with development partners including the Red Cross Society, the World Food Programme, YODEP, EAGLES, Emmanuel International, and UNECO. It also comprised 17 Focus Group Discussions (FGDs), disaggregated by women's, youth, men's, and mixed groups, engaging 155 FGD participants with a recorded sex breakdown. In total, 200 stakeholders contributed directly to the concept note through completed KIIs and FGDs, with attendance registers and photographic documentation retained for five of the seven districts.

Consultations were carried out in Karonga, Chikwawa, Zomba, Machinga, Mangochi, Phalombe, and Nsanje, corresponding to the project's indicative target districts. Coverage varied by district, ranging from 18 total participants in Karonga and Machinga to 49 in Phalombe, reflecting differences in population density, accessibility, and the number of Traditional Authorities engaged. Participants included district councils, extension staff, traditional leaders, smallholder and fisher groups, women, youth, and vulnerable households.

The consultation methodology combined institutional interviews with community-level dialogue to capture both technical and lived-experience perspectives on climate risk. KIIs drew on the professional expertise of district officials and sector specialists to characterize hazard trends, service gaps, and institutional capacity, while FGDs were deliberately disaggregated by women's, youth's, men's, and mixed groups to surface the differentiated ways climate shocks are experienced across a community. This structure ensured that the priorities of women managing household water and food security, young people facing constrained livelihood options, and men engaged in farming and fishing were each captured distinctly rather than folded into a single generic community view, strengthening the evidence base for gender-responsive and socially inclusive project design.

Across all seven districts, stakeholders consistently identified erratic and shortening rainy seasons, recurrent drought and flash flooding, declining soil fertility, and deforestation linked to charcoal and firewood dependence as the primary drivers of falling agricultural yields and food insecurity. Water insecurity emerged as a cross-cutting concern, encompassing dry-season borehole failure, flood-related contamination of water sources, and damage to water infrastructure, with women and girls disproportionately affected by the additional time burden of water collection. Several districts, including Karonga, Chikwawa, and Nsanje, reported specific evidence of forest and landscape degradation – including an estimated 700 hectares of forest lost in Karonga in 2025 alone – alongside early positive results from community-led afforestation in Nsanje. Infrastructure vulnerability was also widely reported, including damaged schools, health facilities, markets, and irrigation systems, together with elevated disease risk (notably cholera in Machinga) following flood-induced sanitation failures. Social dimensions of vulnerability, including women's constrained bargaining power under Machinga's matrilineal land and marriage system, and reliance on village savings groups as an informal coping mechanism in Zomba, were also raised.

These consultation findings directly informed the design of all four MARESA technical components. Community risk assessments, early-warning priorities, and gender-responsive planning needs identified during KIIs and FGDs are reflected in Component 1 (Community-based Adaptation Planning, Governance, and Climate Information Systems). Reported soil fertility decline, deforestation, and demand for drought-tolerant and irrigated agriculture inform Component 2 (Climate-Resilient Agriculture, Irrigation, and Ecosystem Restoration). Infrastructure damage, water insecurity, and requests for solar-powered irrigation and water systems inform Component 3 (Climate-Resilient Infrastructure and Decentralized Renewable Energy). Reported barriers to credit, donor-relief dependence, and demand for women- and youth-led livelihood diversification inform Component 4 (Inclusive Climate Finance, Adaptation MSMEs, and Institutional Capacity).

Beyond the consultations already conducted for this Concept Note, further stakeholder engagement is planned during full proposal preparation, involving government institutions, district councils, technical agencies, civil society, private sector actors, development partners, traditional leaders, and women's, youth, and other vulnerable groups at national, district, and community levels, with particular attention to persons with disabilities, elderly populations, smallholder farmers, and fisher communities, and to differentiated barriers around land, water, finance, climate information, and decision making. This will combine stakeholder meetings, key informant interviews, focus group discussions (including separate sessions for women and youth where appropriate), district workshops, field visits, and participatory climate vulnerability and Water, Energy and Food nexus assessments to validate risks, priorities, and institutional gaps. Findings will feed directly into the Environmental and Social Management Framework, Gender Action Plan, stakeholder engagement mechanisms, and grievance redress systems, with consultation continuing throughout project formulation through community and district review meetings and participatory monitoring to keep the design responsive to evolving risks and priorities.

I. Justification for funding

The project seeks grant financing from the Adaptation Fund to address the additional costs imposed by climate change on vulnerable communities, ecosystems, infrastructure systems, and local economies in Malawi. The requested financing is justified because the proposed interventions are specifically designed to reduce climate related risks and vulnerabilities that would not be addressed under a business-as-usual development scenario. The project therefore represents the additional “full cost of adaptation” required to enable climate resilient development in highly climate vulnerable districts facing recurrent droughts, floods, cyclones, land degradation, food insecurity, weak infrastructure, and low adaptive capacity.

Malawi is among the countries most vulnerable to climate change globally due to its high dependence on rain-fed agriculture, widespread poverty, environmental degradation, and limited adaptive capacity. Agriculture contributes approximately 30 percent of GDP, employs the majority of the labor force, and supports the livelihoods of most rural households, yet over 95 percent of agricultural production depends on rainfall that is becoming increasingly erratic and unreliable under climate change (Government of Malawi, 2021). Climate-related disasters, including droughts, floods, tropical storms, and cyclones are increasing in frequency and intensity, resulting in repeated losses of crops, infrastructure, livelihoods, ecosystems, and productive assets.

Malawi's Nationally Determined Contribution (NDC) estimates that climate impacts are already causing annual economic losses equivalent to at least 5 percent of GDP (Government of Malawi, 2021).

Under a business-as-usual scenario, development investments in agriculture, rural infrastructure, energy access, and livelihoods would continue without incorporating the additional adaptation measures required to address increasing climate risks. Existing systems and infrastructure were largely designed under historical climate conditions and are increasingly unable to withstand current and projected climate variability and extreme weather events. For example, traditional rain-fed agriculture without irrigation support, climate resilient crops, soil water conservation, and ecosystem restoration is no longer sufficient to sustain food security and livelihoods under recurrent drought and flood conditions. Similarly, conventional rural development investments often fail to address climate risks associated with water insecurity, post-harvest losses, ecosystem degradation, energy poverty, and weak climate information systems.

The project finances the incremental adaptation costs necessary to climate-proof vulnerable communities, productive systems, and local economies against escalating climate risks and climate variability. These costs extend beyond conventional development investments and specifically address the additional measures required to enhance resilience to climate change impacts. The project therefore supports a comprehensive package of climate adaptation interventions, including climate-smart agriculture technologies and practices; climate-resilient irrigation and water harvesting systems; watershed restoration and ecosystem-based adaptation measures; climate information services and early warning systems; renewable energy solutions that support adaptation functions; climate-resilient storage and agro-processing infrastructure; adaptation-focused MSME development and livelihood diversification; community-based adaptation planning and governance systems; institutional and community capacity building for climate risk management; and robust monitoring, learning, and environmental and social safeguards systems tailored to climate adaptation objectives.

Without Adaptation Fund financing, these climate specific adaptation investments would either not occur or would be implemented at a scale insufficient to address the magnitude of climate risks faced by vulnerable communities. Existing national and district level budgets are already highly constrained and primarily directed toward recurrent expenditures and post disaster response rather than long term resilience building. Development financing available to local governments and rural communities is generally inadequate to finance integrated adaptation investments such as climate resilient irrigation systems, renewable energy powered productive infrastructure, watershed restoration, decentralized climate information systems, and adaptation focused enterprise development.

The requested financing is also justified because the project targets communities and livelihood systems that have very limited capacity to absorb the costs of adaptation on their own. Vulnerable households in the target districts face multiple constraints, including low incomes, limited access to finance, weak infrastructure, low irrigation coverage, poor market access, environmental degradation, and limited access to climate information and technologies. Women, youth, female headed households, persons with disabilities, and marginalized populations face even greater barriers due to unequal access to productive resources, land, finance, energy, irrigation systems, and decision-making processes. These groups are unable to independently finance the additional costs required for climate adaptation despite facing disproportionate climate impacts.

The full cost of adaptation reasoning for each major project component is summarized below.

Component 1: Community-based adaptation Planning, Governance, and Climate Information Systems

Under a business-as-usual scenario, local planning systems in Malawi would continue to function with limited integration of climate risk information, weak adaptation governance, and inadequate climate information services, leaving communities highly vulnerable to floods, droughts, storms, and other climate-related hazards. In response, the MARESA project finances critical additional adaptation measures that go beyond conventional development investments, including participatory climate vulnerability and Water–Energy–Food (WEF) nexus assessments, community-based adaptation planning systems, climate information dissemination platforms, early warning systems, climate literacy and adaptation awareness programs, and institutional strengthening for climate risk management. These targeted adaptation investments are necessary

because climate change has significantly increased climate variability, uncertainty, and disaster risks, creating challenges that cannot be effectively addressed under historical development and planning approaches alone.

Component 2: Climate-Resilient Agriculture, Irrigation, and Ecosystem Restoration

Under business-as-usual conditions, traditional agricultural investments would be insufficient to address the growing impacts of climate change, including increasing climate variability, prolonged droughts, declining soil fertility, land degradation, and water scarcity. Malawi's predominantly rain-fed farming systems remain highly vulnerable to climate shocks and are becoming increasingly unsustainable under future climate projections. The MARESA project therefore finances additional adaptation measures that directly strengthen resilience and reduce climate-related risks to food security, water resources, and ecosystem services. These include the promotion of climate-smart agriculture technologies, drought-tolerant crops and diversified farming systems, climate-resilient irrigation infrastructure, rainwater harvesting and soil moisture conservation practices, agroforestry and ecosystem restoration, watershed rehabilitation, and climate-resilient livelihood diversification. Together, these interventions enhance adaptive capacity, improve ecosystem functionality, and support sustainable and resilient rural livelihoods.

Component 3: Climate-Resilient Infrastructure and Decentralized Renewable Energy Systems

Conventional infrastructure investments in rural and agricultural landscapes are often designed based on historical climate conditions and therefore remain highly vulnerable to the increasing frequency and intensity of climate-related hazards such as floods, prolonged droughts, soil erosion, storms, and extreme heat stress. In many vulnerable communities, inadequate rural energy access further constrains adaptive capacity by limiting irrigation opportunities, reducing value addition and agro processing potential, increasing post-harvest losses, and weakening local economic systems and livelihood resilience. Under the MARESA project, the proposed investments therefore go beyond standard development infrastructure by incorporating targeted climate adaptation measures that specifically address current and projected climate risks. These additional adaptation costs include the establishment of climate-resilient storage and productive infrastructure; deployment of solar-powered irrigation and agro processing systems to reduce dependence on unreliable fossil fuel-based or grid energy sources; installation of renewable energy-powered cold storage facilities to minimize food losses and enhance market access; application of flood-resilient and drought-resilient infrastructure standards; climate-proofing of community infrastructure to withstand climate shocks and environmental degradation; and development of community-based operation and maintenance systems to ensure the long-term functionality and sustainability of resilience assets. Collectively, these interventions represent essential incremental adaptation expenditures that are required to safeguard livelihoods, strengthen local resilience, and ensure that infrastructure investments remain functional and beneficial under future climate scenarios, beyond the costs associated with conventional infrastructure development.

Component 4: Inclusive Climate Finance, Adaptation MSMEs, and Institutional Capacity for Long-Term Adaptation

Under a business-as-usual scenario, vulnerable households, smallholder farmers, women, youth, and local enterprises in Malawi continue to face severe barriers in accessing climate finance, adaptation technologies, and diversified climate-resilient livelihood opportunities, thereby increasing their exposure to recurrent climate shocks such as droughts, floods, cyclones, land degradation, and food insecurity. Existing financial and investment systems remain largely inaccessible to rural and marginalized populations due to limited financial inclusion, weak institutional outreach, high investment risks, inadequate adaptation-focused financing mechanisms, and low technical capacity to support locally driven resilience initiatives. As a result, adaptation-oriented micro, small, and medium enterprises (MSMEs) remain underdeveloped, while communities lack the resources and institutional support required to transition toward resilient and sustainable livelihoods. The additional adaptation costs financed under the MARESA project are therefore essential to overcome these structural barriers and build long-term adaptive capacity. These costs include the establishment of climate adaptation grants and revolving financing systems to improve access to finance for vulnerable groups; targeted support for climate-resilient MSMEs and adaptation-focused enterprise development to stimulate green and inclusive local economies; dedicated women and youth adaptation financing mechanisms to enhance social inclusion and equitable access to opportunities; capacity building for adaptation

entrepreneurship, innovation, and business development; and institutional strengthening for climate adaptation planning, coordination, and implementation at local and national levels. Collectively, these interventions are critical to reducing climate-induced livelihood risks, enhancing economic resilience, promoting community-based adaptation, and enabling vulnerable communities to sustainably cope with current and future climate variability and change.

Component 5: Project Coordination, Learning, Monitoring, and Knowledge Management

Climate adaptation investments require robust and highly specialized systems for monitoring, safeguards, learning, and adaptive management that extend well beyond conventional development monitoring and reporting frameworks. In the context of the MARESA Project, these additional adaptation costs are essential to ensure that project interventions remain responsive, effective, and sustainable under increasingly dynamic and uncertain climate conditions. The project therefore allocates dedicated resources for the establishment and operation of climate adaptation monitoring and evaluation systems capable of tracking resilience outcomes, climate risks, vulnerability reduction, and adaptation effectiveness over time. Complementary environmental and social safeguards systems are integrated to ensure that project activities comply with national regulations and the Adaptation Fund Environmental and Social Policy, while minimizing unintended environmental or social risks and strengthening inclusion and accountability. In addition, gender-responsive adaptation monitoring mechanisms are incorporated to systematically assess differentiated climate impacts on women, men, youth, and vulnerable groups, ensuring equitable participation and benefit sharing. The project also invests in knowledge management and adaptation learning platforms that facilitate evidence generation, documentation of lessons learned, peer-to-peer exchange, and dissemination of best practices across sectors and landscapes. Furthermore, climate resilience indicators and reporting systems are designed to generate reliable data for adaptive decision-making, results-based management, and reporting to national and international stakeholders. Finally, adaptive management and scaling mechanisms enable the project to continuously refine interventions based on emerging climate information, field evidence, community feedback, and implementation experiences, thereby enhancing long-term resilience, institutional learning, and the potential for replication and scaling of successful adaptation models.

Incremental Adaptation Benefits

The requested financing under the MARESA Project will generate substantial incremental adaptation benefits that would not materialize under a conventional, non-climate-focused development scenario. The proposed interventions are specifically designed to address the escalating impacts of climate change on vulnerable rural communities, ecosystems, and productive landscapes in Malawi. Through integrated investments in climate-resilient agriculture, watershed restoration, renewable energy access, climate information services, and disaster preparedness, the project will significantly reduce the climate vulnerability of households and natural systems. These investments will contribute to improved food and water security, enhanced resilience of agricultural production systems, reduced post-harvest losses, and strengthened preparedness for climate-induced disasters such as droughts, floods, cyclones, and prolonged dry spells. In addition, the project will improve access to renewable and decentralized energy solutions that support adaptation needs, while reducing pressure on forests and fragile ecosystems. The interventions will also strengthen local governance systems, institutional coordination, and community-based adaptation planning mechanisms necessary for sustaining long-term resilience.

Importantly, the project places strong emphasis on community-based adaptation and inclusive resilience building, with particular attention to women, youth, and other vulnerable population groups who are disproportionately affected by climate change impacts. By strengthening adaptive capacity at household, community, institutional, and ecosystem levels, the project will help reduce ecosystem degradation, restore watershed functions, and improve the sustainability of productive landscapes and local economies. The Adaptation Fund financing is therefore fully justified because it addresses the additional and incremental costs required to achieve climate-resilient development outcomes that exceed standard development investments. Without grant financing, these adaptation measures would either not be implemented or would occur at insufficient scale and effectiveness to respond to rapidly increasing climate risks. The MARESA Project thus represents a critical, cost-effective, and transformative adaptation investment that addresses the direct costs

imposed by climate change while generating long-term social, environmental, economic, and institutional resilience benefits for Malawi.

J. Sustainability of the project

Sustainability has been embedded from the outset in the design of MARESA to ensure that project benefits continue beyond the grant period. The project is structured around an integrated water–energy–food (WEF) nexus approach that brings together governance, livelihoods, infrastructure, ecosystems, and climate finance. Rather than supporting stand-alone activities, the project promotes interconnected systems that reinforce one another through strengthened local institutions for adaptation planning and implementation, resilient technologies that reduce climate risks while generating sustainable livelihoods, and supportive policies and financing mechanisms that sustain and scale adaptation investments beyond the project lifetime.

Institutional and Policy Sustainability: The sustainability of the MARESA Project has been strongly integrated into the institutional and policy design of the program to ensure that adaptation benefits continue beyond the project implementation period. The project is aligned with Malawi 2063, the National Adaptation Plan (NAP) Framework, the Updated Nationally Determined Contribution (NDC), the National Climate Change Management Policy, the National Agriculture Policy, and the National Energy Policy, thereby ensuring that project interventions support long term national development and climate adaptation priorities (Government of Malawi, 2020; Government of Malawi, 2021). The project will strengthen institutional capacities at national, district, and community levels through training, technical assistance, climate adaptation planning systems, monitoring frameworks, and community-based adaptation governance mechanisms. District councils, sector ministries, extension systems, local committees, and community organizations will be actively involved in implementation, coordination, monitoring, and decision making to strengthen institutional ownership and long-term continuity. The project will also mainstream adaptation priorities into district development plans, local budgeting systems, and sectoral coordination platforms to ensure that climate adaptation remains integrated into government planning and investment systems beyond the project lifecycle. Through policy dialogue, knowledge sharing, and institutional strengthening, the project will contribute to sustained integration of climate resilient development approaches into national and sub-national governance systems.

Financial Sustainability: The project has been designed to strengthen long term financial sustainability by supporting climate resilient livelihood systems, adaptation focused enterprises, local financing mechanisms, and productive investments that generate continued economic benefits after project completion. Climate-smart agriculture, irrigation systems, renewable energy powered productive infrastructure, agro processing, storage systems, and resilient value chains are expected to improve productivity, reduce post-harvest losses, increase household incomes, and strengthen local economic resilience. The project will establish and strengthen community adaptation financing systems, revolving funds, producer cooperatives, savings groups, and climate responsive MSMEs to improve local access to finance and support continued investment in adaptation activities. Support for women and youth enterprises, local service providers, and adaptation focused businesses will help create sustainable local economic opportunities linked to climate resilient production systems. The project will also strengthen partnerships with financial institutions, development programs, and private sector actors to improve access to climate finance and blended financing opportunities. By increasing local incomes, reducing climate related losses, and strengthening adaptation focused economic systems, the project reduces long term dependence on external support and enhances the financial sustainability of adaptation investments.

Technical and Operational Sustainability: Technical and operational sustainability has been integrated into project design through the use of locally appropriate technologies, capacity building, community ownership mechanisms, and long-term maintenance systems. The project prioritizes climate resilient technologies and approaches that are technically feasible, affordable, environmentally suitable, and manageable within local conditions. These include climate-smart agriculture practices, decentralized renewable energy systems, community irrigation systems, rainwater harvesting, agroforestry, watershed restoration, and locally manageable storage and agro processing technologies. Extensive training and technical support will be provided to local institutions, extension workers, community organizations, cooperatives, and local technicians

to ensure that communities possess the knowledge and skills required to operate, maintain, and replicate project interventions. Community management committees and local governance structures will be established to oversee operation and maintenance of infrastructure, renewable energy systems, irrigation schemes, and adaptation assets. The project will also strengthen local technical service providers and extension systems to support long term technical backstopping after project closure. By building local technical capacity and ownership, the project ensures that adaptation systems remain functional, replicable, and sustainable over time.

Environmental Sustainability: Environmental sustainability is a central principle of the MARESA Project and has been fully integrated into the design of all project interventions. The project adopts an integrated Water-Energy-Food (WEF) nexus approach that simultaneously strengthens livelihoods, restores ecosystems, improves water security, and reduces environmental degradation. Ecosystem restoration, watershed rehabilitation, agroforestry, reforestation, soil and water conservation, climate-smart agriculture, and sustainable land management interventions will improve soil fertility, reduce erosion, strengthen biodiversity functions, enhance water retention, and improve resilience of ecosystems to climate change. The project also promotes decentralized renewable energy systems to reduce dependence on biomass energy and minimize pressure on forests and natural resources. Environmental sustainability will be further strengthened through compliance with Malawi's environmental regulations and the Adaptation Fund Environmental and Social Policy, including implementation of environmental and social safeguards frameworks, environmental screening procedures, sustainable infrastructure standards, and monitoring systems. The project avoids environmentally harmful activities and instead prioritizes nature-based adaptation approaches and sustainable resource management systems that provide long term environmental and climate resilience benefits for communities and ecosystems.

Social and Gender Sustainability: The MARESA Project has been intentionally designed to promote long term social inclusion, gender equality, community ownership, and equitable access to adaptation benefits. Women, youth, persons with disabilities, elderly populations, and marginalized households are among the groups most vulnerable to climate change in Malawi due to structural inequalities in access to land, finance, climate information, productive assets, infrastructure, and decision-making processes. The project therefore applies a gender responsive and socially inclusive adaptation approach consistent with the Adaptation Fund Gender Policy and Environmental and Social Policy. Women and vulnerable groups will actively participate in adaptation planning, local governance structures, livelihood programs, climate finance mechanisms, and enterprise development initiatives. The project will strengthen women led and youth led adaptation enterprises, improve access to climate resilient technologies and financing systems, and support equitable participation in local adaptation decision making processes. Community based consultation systems, grievance mechanisms, participatory monitoring, and local adaptation committees will further strengthen social accountability, inclusion, and ownership of project interventions. By strengthening local capacities, improving social inclusion, reducing vulnerability, and supporting equitable benefit sharing, the project enhances the long-term sustainability and acceptance of adaptation investments across target communities.

Beyond participation, the project addresses systemic barriers that limit the resilience of vulnerable groups by embedding gender-sensitive planning, monitoring, and accountability mechanisms. Gender-disaggregated indicators, inclusive governance structures, and grievance redress systems ensure that benefits are equitably distributed and that risks of exclusion are minimized. By creating economic opportunities and strengthening voice and agency among women and youth, the project ensures that adaptation outcomes are not only sustained but also socially transformative over time.

Overall, the project's sustainability is designed, not assumed. By embedding interventions within existing institutions, local economies, resilient technologies, healthy ecosystems, and continuous learning systems, the project ensures that outcomes are maintained, financed, and scaled after the grant period, delivering enduring climate resilience in Malawi's most vulnerable districts.

K. Environmental and social impacts and risks

This preliminary Environmental and Social Risk Assessment has been prepared for the Malawi Adaptation and Resilience for Sustainable Agriculture (MARESA) Project in alignment with the Adaptation Fund's Environmental and Social Policy (ESP) and Environmental and Social Safeguards (ESS) framework.

The assessment identifies the potential environmental and social risks associated with the proposed project interventions, provides preliminary risk ratings for each safeguard principle, and outlines indicative mitigation and management measures required to ensure compliance with national regulations, Adaptation Fund safeguard requirements, and good international practices.

The project is expected to generate significant climate resilience, environmental, and socio-economic benefits for climate-vulnerable communities in Malawi through climate-smart agriculture, ecosystem restoration, resilient infrastructure, renewable energy, and community-based adaptation interventions. However, careful management of environmental and social risks will be required to ensure inclusive, equitable, and environmentally sustainable implementation.

This assessment represents a preliminary screening at the Concept Note stage. During full project preparation, more detailed environmental and social assessments, stakeholder consultations, and site-specific studies will be conducted to inform the development of safeguard instruments, including ESMPs, Gender Action Plans, Stakeholder Engagement Plans, and Grievance Redress Mechanisms (GRMs).

Table 7. Preliminary Environmental and Social Risk Assessment

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		Low or no risk. Further assessment required. The proposed project will be implemented in partnership with the Government of Malawi, district authorities, and relevant sectoral institutions, ensuring alignment with national environmental, climate, labor, land-use, and social safeguard policies and regulations. During the full project preparation stage, a more detailed review of applicable national laws, environmental regulations, institutional mandates, and safeguard requirements will be conducted to ensure full compliance throughout implementation. Environmental permits and approvals will be secured where necessary.
Access and Equity		Low risk. Further assessment required. The project adopts a community-based and inclusive adaptation approach designed to ensure equitable access to project benefits, services, climate information, infrastructure, financing opportunities, and livelihood support for climate-vulnerable communities. There may be risks that women, youth, persons with disabilities, remote communities, and marginalized households may not equally benefit from project interventions due to geographic, economic, or social barriers. During full project preparation, stakeholder consultations, targeting criteria, and social inclusion assessments will be undertaken to ensure fair and inclusive participation. A grievance redress mechanism (GRM) will also be established.
Marginalized and Vulnerable Groups		Low to Medium Risk. Further assessment required. The project specifically targets climate-vulnerable populations including smallholder farmers, women-headed households, fisher communities, youth, and vulnerable rural households in highly climate-exposed districts. Vulnerable groups may face barriers to participation, access to resources, climate finance, adaptation technologies, or decision-making processes. During the full proposal preparation phase, vulnerability assessments and social inclusion analyses will be undertaken to guide targeted interventions and ensure meaningful participation of vulnerable groups.
Human Rights		Low or no risk. Further assessment required. The project promotes participation, inclusion, transparency, accountability, and equitable access to adaptation benefits and services. Risks may arise if consultations are not fully inclusive or if vulnerable populations are unintentionally excluded from adaptation planning processes. The project will ensure culturally appropriate consultations, transparent stakeholder engagement, and accessible grievance mechanisms throughout implementation.
Gender Equality and Women's Empowerment		Medium Risk. Further assessment required. Women and girls in target districts may face barriers related to land access, climate finance, leadership opportunities, extension services, and productive assets. During full proposal development, a Gender Action Plan and gender-responsive implementation framework will be prepared. Consultations with women's groups and female beneficiaries will help ensure that women meaningfully participate in and benefit from project interventions. Sex-disaggregated indicators and gender-responsive monitoring systems will be applied.
Core Labour Rights		Medium Risk. Further assessment required. The project includes agriculture, ecosystem restoration, renewable energy, and small-scale infrastructure activities that may involve occupational health and safety risks or informal labor arrangements. During detailed project preparation, labor-related risks and occupational safety requirements will be assessed. The project will comply with Malawi labor laws and relevant ILO standards. Child labor and forced labor will be prohibited. Worker grievance mechanisms and occupational health and safety measures will be established during implementation.
Indigenous Peoples		Low to Medium Risk. Further assessment required. Some project areas may include traditional or culturally distinct communities whose livelihoods and natural resource use systems are highly climate

Checklist of environmental and social principles	No further assessment required for compliance	Potential impacts and risks – further assessment and management required for compliance
		sensitive. During the full proposal stage, stakeholder consultations and social assessments will determine whether specific Indigenous Peoples safeguard measures are required. Where relevant, culturally appropriate consultations and Free, Prior and Informed Consent (FPIC) principles will be respected. Traditional knowledge systems relevant to climate adaptation will also be considered.
Involuntary Resettlement		Low or no risk. Further assessment is required. The project is not expected to involve physical displacement or involuntary resettlement. Minor temporary land-use restrictions or localized access limitations could potentially arise from infrastructure development, irrigation systems, or ecosystem restoration activities. During detailed project preparation, site-specific assessments and consultation processes will be conducted to avoid or minimize any land-related impacts. The perceived risk to project, will be assessed per the UNIDO ESS framework and addressed accordingly during project implementation.
Protection of Natural Habitats		Low Risk. Further assessment required. The project promotes ecosystem restoration, watershed rehabilitation, agroforestry, and sustainable natural resource management. Some project interventions may take place near wetlands, forests, river systems, or ecologically sensitive areas. During full proposal preparation, environmental screening and site-specific assessments will be undertaken to identify and manage any potential impacts on natural habitats.
Conservation of Biological Diversity		Low Risk. Further assessment required. The project promotes biodiversity conservation through ecosystem restoration, sustainable agriculture, reforestation, agroforestry, and climate-smart land management approaches. Potential risks could arise from inappropriate land-use practices, introduction of non-native species, or poorly managed infrastructure activities. During the next phase, biodiversity considerations and ecosystem management measures will be further assessed and incorporated into site-specific ESMPs where required.
Climate Change		Low Risk. Further assessment is required. The project is specifically designed to strengthen climate resilience and adaptation capacity in highly climate-vulnerable districts of Malawi. Climate hazards such as floods, droughts, cyclones, and erratic rainfall may affect implementation and infrastructure performance. During detailed project preparation, climate risk assessments and climate-resilient infrastructure standards will be integrated into project design and implementation planning.
Pollution Prevention and Resource Efficiency		Medium Risk. Further assessment required. Agricultural activities, infrastructure development, irrigation systems, and construction works may generate localized pollution risks, waste generation, soil disturbance, or inefficient resource use if not properly managed. During the full proposal preparation phase, environmental and social management plans (ESMPs) and pollution prevention measures will be developed where required. The project will promote sustainable agricultural practices, integrated pest management, water efficiency, waste reduction, and environmentally sustainable technologies.
Public Health		Low or no risk. Further assessment is required. The project is expected to improve food security, water access, climate preparedness, and livelihood resilience in target communities. Some activities may involve occupational hazards, chemical exposure, or localized health and safety risks during implementation. During the next phase, occupational health and safety measures, community awareness programs, and emergency preparedness procedures will be integrated into implementation arrangements where relevant.
Physical and Cultural Heritage		Low or no risk. Further assessment is required. The project is not expected to adversely affect known cultural, archaeological, or heritage sites. Small-scale infrastructure or land development activities may unintentionally encounter culturally significant sites or artifacts. During implementation, chance-find procedures and culturally sensitive consultation processes will be applied where necessary.
Land and Soil Conservation		Low Risk. Further assessment required. The project strongly promotes sustainable land management, soil conservation, agroforestry, watershed restoration, and climate-smart agricultural practices. Some interventions may temporarily disturb soils or contribute to localized erosion during implementation. During full project preparation, site-specific environmental assessments and soil conservation measures will be further developed to minimize potential impacts and strengthen long-term land productivity and ecosystem resilience.

Adaptation Fund environmental and social risk category: Category B. The preliminary screening in Table 7 classifies MARESA as Category B because its potential adverse impacts are expected to be site-specific, limited in scale, largely reversible, and manageable through established mitigation measures. The rating reflects small-scale infrastructure, irrigation and water works, decentralized energy installations, ecosystem restoration, enterprise support, possible land-access issues, labour and community health-and-safety risks, and the use of partially unidentified sub-projects. No Category A activity, involuntary resettlement, or conversion of critical habitat will be eligible. The classification will be confirmed during full proposal preparation after site information, consultations, and detailed screening are available.

Most identified risks are considered manageable through the application of appropriate mitigation measures, safeguard instruments, participatory planning processes, environmental screening procedures, and continuous monitoring systems. No significant irreversible environmental or social impacts are anticipated at this stage. Implementing partners, local authorities, community representatives, and relevant stakeholders will participate in safeguard monitoring processes to strengthen transparency, accountability, and ownership.

Unidentified Sub-Projects under MARESA

MARESA will not finance fully unidentified sub-projects for which both the activity and location are unknown. Activities fully defined at concept stage include planning, capacity development, institutional systems, climate-information services, knowledge management, and the eligible intervention categories described under Components 1-5. Partially unidentified sub-projects are limited to site-specific community investments and competitively selected MSME or enterprise support within the approved districts and fixed intervention framework. The component descriptions above identify which details will be completed during full proposal preparation and which residual selections may occur during implementation.

During full proposal preparation, the project-level ESMP will establish an approved intervention menu; eligibility and exclusion criteria; climate-rationale and cost-effectiveness tests; gender and inclusion requirements; land, water, biodiversity, labour, and community-safety screening; consultation and disclosure procedures; grievance access; institutional responsibilities; budget; and monitoring and reporting requirements. Before any residual sub-project is approved or implemented, UNIDO and the responsible EE will document risk identification against all 15 Adaptation Fund ESP principles, undertake commensurate impact assessment, define and finance mitigation measures, obtain national approvals, consult affected stakeholders using sex-disaggregated data, and update the ESMP. USP performance and safeguards compliance will be reported annually and assessed at mid-term and final evaluation.

Several activities under Components 1–4 of the MARESA Project may qualify as Unidentified Sub-Projects (USPs) under Adaptation Fund guidance. These include: (i) the final selection of locally appropriate adaptation measures and technologies for vulnerable households, farmer groups, MSMEs, and communities; (ii) the identification and support of adaptation-focused MSMEs, producer organizations, and service providers; (iii) the design and deployment of localized climate information, early warning, and advisory services; and (iv) the selection of demonstration sites, climate-resilient infrastructure investments, ecosystem restoration measures, livelihood diversification activities, and community adaptation packages within the target districts.

These interventions are intentionally not fully defined at the concept stage to allow adaptation investments to be tailored to the specific climate risks, ecosystem conditions, livelihood priorities, institutional capacities, and development needs of the target districts and communities. Climate vulnerabilities vary considerably across Karonga, Machinga, Mangochi, Phalombe, Nsanje, Chikwawa, and the Lower Shire areas of Zomba, including differing levels of exposure to floods, droughts, tropical cyclones, erratic rainfall, land degradation, water stress, and ecosystem decline. Consequently, detailed intervention design will be informed by comprehensive climate risk assessments, technical feasibility studies, stakeholder consultations, and socio-economic analyses undertaken during project preparation and implementation. This flexible and evidence-based approach will help ensure that adaptation investments are context-specific, technically sound, cost-effective, and responsive to local priorities while reducing the risk of maladaptation.

Consistent with the Adaptation Fund's USP guidance, the use of USPs is justified because the final nature, location, scale, and design of certain interventions can only be determined after participatory planning processes, climate risk and vulnerability assessments, environmental and social screening, and stakeholder consultations. This approach enables demand-driven and inclusive co-design of adaptation solutions with communities, women, youth, vulnerable groups, local authorities, and other stakeholders, thereby strengthening ownership, sustainability, and adaptation effectiveness. All USPs will be implemented within a clearly defined project framework and will be governed by an Environmental and Social Management Framework (ESMF) to be prepared during full proposal development. The ESMF will establish procedures for environmental and social screening; eligibility and selection criteria; exclusion criteria for activities with significant adverse impacts; stakeholder engagement and grievance redress mechanisms; gender-responsive and socially inclusive planning requirements; and safeguards monitoring and oversight responsibilities for UNIDO and national implementing partners.

Adequate resources will be allocated for safeguards screening, stakeholder consultations, gender assessments, climate risk analyses, environmental and social assessments, and grievance management. The project's monitoring, evaluation, accountability, and learning (MEAL) system will track the identification, approval, implementation, and safeguards performance of all USPs to ensure full compliance with the Adaptation Fund's Environmental and Social Policy, Gender Policy, and USP requirements.

PART III: IMPLEMENTATION ARRANGEMENTS

A. Alignment with the Adaptation Fund Strategic Results Framework

Table 8. Alignment with the Adaptation Fund Strategic Results Framework

Project Outcomes	Project Outcome Indicator(s)	Fund Outcome	Fund Outcome Indicator	Grant Amount (USD)
Outcome 1: Adaptive capacity, local ownership, and climate-informed decision-making strengthened	7 districts using improved risk information; 35 community plans; 150,000 people covered by warning/advisory services; 1,400 people with improved climate-risk awareness (sex/vulnerability disaggregated).	Outcome 1: Reduced exposure to climate-related hazards and threats. Outcome 3: Strengthened awareness and ownership. Outcome 7: Improved policies and regulations that promote and enforce resilience measures	Indicator 1: People using climate-related threat and hazard information. Indicator 3A: People with strengthened awareness of climate change risks and how to better address them Indicator 7: Policies, strategies, and/or plans adopted, implemented, and/or enforced that integrate climate risk and resilience considerations	\$300,000 \$350,000 \$250,000 = 900,000
Outcome 2: Food security, ecosystem resilience, and adaptive livelihoods strengthened	30,000 households adopting resilient practices; 6,000 ha under resilient agriculture; 3,000 ha restored; households with increased or protected income (sex/female-headed-household disaggregation).	Outcome 3: Strengthened awareness and ownership of adaptation and climate risk reduction processes Outcome 4: Increased adaptive capacity within relevant development sector services and infrastructure assets Outcome 5: Increased ecosystem resilience. Outcome 6: Diversified and strengthened livelihoods and incomes.	Indicator 3A: People with strengthened awareness of climate change risks and how to better address them Indicator 4 (Core Indicator 3): Physical assets improved or constructed to withstand climate variability and change Indicator 5 (Core Indicator 4): Ecosystems and natural resources brought under protection, restoration, or improved management in response to climate variability and change Indicator 6A: People adopting improved and/or new climate-resilient livelihood practices	\$600,000 \$1,200,000 \$600,000 \$600,000 =3,000,000
Outcome 3: Resilience of communities and productive systems enhanced through climate-proofed infrastructure and energy	At least 42 physical assets or systems improved/constructed; 35 management committees functional; at least 20% lower post-harvest losses at supported facilities.	Outcome 2: Strengthened institutional capacity to reduce risks associated with climate-induced socioeconomic and environmental losses Outcome 4: Increased adaptive capacity within development services and infrastructure assets.	Indicator 2: Institutions with strengthened capacity to understand and better address climate risks and resilience Ind. 4 (Core Ind. 3): Physical assets improved or constructed to withstand climate variability and change.	\$800,000 \$1,900,000 =2,700,000
Outcome 4: Institutional capacity and financial sustainability strengthened	120 MSMEs/cooperatives supported; 35 finance groups; USD 1 million additional finance; 300 jobs; 7 district plans and relevant national systems integrate tested adaptation models.	Outcome 6: Diversified and strengthened livelihoods and incomes. Outcome 2: Strengthened institutional capacity to reduce risks associated with climate-induced socioeconomic and environmental losses Outcome 8: Innovation for effective, long-term adaptation to climate change accelerated, encouraged, and enabled to scale up	Indicator 6A: People adopting improved and/or new climate-resilient livelihood practices Indicator 2: Institutions with strengthened capacity to understand and better address climate risks and resilience Indicator 8A: Innovations successfully reaching scale up that demonstrate local innovation participation and/or local innovation benefit	\$550,000 \$250,000 \$455,184 =1,255,184
Outcome 5: Effective delivery, accountability, learning, and scaling ensured	At least 90% of milestones on schedule; 25 knowledge products; 14 learning events; 5 adaptation models documented for replication.	Outcome 2: Strengthened institutional capacity to reduce risks associated with climate-induced socioeconomic and environmental losses Outcome 3: Strengthened awareness and ownership of adaptation and climate risk reduction processes	Indicator 2: Institutions with strengthened capacity to understand and better address climate risks and resilience Indicator 3A: People with strengthened awareness of climate change risks and how to better address them	\$550,000 \$328,407 =878,407
Total outcome level grant amount				8,733,591

Project Outputs	Project Output Indicator(s)	Fund Output	Fund Output Indicator	Grant Amount (USD)
Output group 1: Risk assessments, plans, governance, warning/advisory services, and	7 district assessments; 35 community assessments/plans/committees; 7 warning/advisory systems; 150,000 people covered;	Output 1.1: Risk and vulnerability assessments conducted and updated	Indicator 1.1: Risk and vulnerability assessments conducted or updated [# of assessments, by sector and by scale]	140,000
		Output 7.1: Improved integration of climate-resilience strategies	Indicator 7.1A (Core Indicator 6): Policies, strategies, and/or plans developed or adjusted to integrate climate risk and resilience considerations	150,000

Project Outputs	Project Output Indicator(s)	Fund Output	Fund Output Indicator	Grant Amount (USD)
capacities operational.	1,400 people trained.		[# of policies, strategies, and/or plans, disaggregated by scale and by sector]	
		Output 2.1: Strengthened institutional capacity	Indicator 2.1: Institutions supported to strengthen capacity to understand and address climate risks and resilience [# of institutions, disaggregated by scale, by sector, and by type of institution]	90,000
		Output 1.2: Warning and advisory services	Indicator 1.2A (Core Indicator 2): Early warning systems established or improved [# of systems, disaggregated by hazard and by scale]	360,000
		Output 3.1: Targeted groups in awareness activities	Indicator 3.1: People participating in activities to improve awareness of climate risks and how to address them [# of people, disaggregated by sex and by vulnerable groups]	160,000
Output group 2: Climate-resilient agriculture, irrigation, restoration, nurseries, and livelihood enterprises delivered.	6,000 ha resilient agriculture; 20 water/irrigation systems; 3,000 ha restored; 14 nurseries; 70 women/youth adaptation enterprises.	Output 1.2: Targeted population groups covered by warning and advisory services for climate-related hazards and threats	Indicator 1.2A (Core Indicator 2): Early warning systems established or improved [# of systems, disaggregated by hazard and by scale]	800,000
		Output 3.1: Targeted population groups participating in adaptation and risk reduction awareness activities	Indicator 3.1: People participating in activities to improve awareness of climate risks and how to address them [# of people, disaggregated by sex and by vulnerable groups]	1,050,000
		Output 4.1: Vulnerable development sector services and infrastructure assets strengthened in response to climate change impacts, including variability	Indicator 4.1: Development sector services strengthened to respond to climate variability and change	650,000
		Output 5.1: Vulnerable ecosystem services and natural resource assets strengthened in response to climate change impacts, including variability	Indicator 5.1: Ecosystems and natural resources targeted by activities to improve protection, restoration, and/or management [# of resources, disaggregated by type of ecosystem/ natural resource area and by protection, restoration, and management]	200,000
		Output 6.1: Targeted individual and community livelihood strategies strengthened in relation to climate change impacts, including variability	6.1: People receiving targeted support for new and/or improved livelihoods to manage climate risk [# of people, disaggregated by sex and by vulnerable groups]	300,000
Output group 3: Climate-proofed infrastructure, renewable energy, and management systems established.	14 water/storage/market facilities; 7 protection works; 21 renewable-energy systems; 35 O&M committees.	Output 4.1: Vulnerable development sector services and infrastructure assets strengthened in response to climate change impacts, including variability	Indicator 4.1: Development sector services strengthened to respond to climate variability and change [# of sector services, disaggregated by sector and by scale]	2,450,000
		Output 2.1: Strengthened capacity of institutions to understand and better address climate risks	Indicator 2.1: Institutions supported to strengthen capacity to understand and address climate risks and resilience [# of institutions, disaggregated by scale, by sector, and by type of institution]	250,000
Output group 4: MSMEs, community finance, institutions, and scaling mechanisms strengthened.	120 MSMEs/cooperatives; 35 finance groups; USD 1 million mobilized; 7 district plans; 5 scaling models.	Output 6.1: Targeted individual and community livelihood strategies strengthened in relation to climate change impacts, including variability	Indicator 6.1: People receiving targeted support for new and/or improved livelihoods to manage climate risk [# of people, disaggregated by sex and by vulnerable groups]	250,000
		Output 2.2: Increased readiness and capacity of national and sub-national entities to directly access and programme adaptation finance	Indicator 2.2: Local institutions receiving funding or other direct support under the locally led adaptation modality [# of institutions]	800,000
		Output 8.1: Innovations identified and piloted that collectively enhance local innovation capacity and contribute to the development of local, national and regional adaptation innovation ecosystems	Indicator 8.1A: Innovations identified that demonstrate local innovation participation and/ or local innovation benefit [# of innovations]	205,184
Output group 5: Coordination, safeguards, MEAL, knowledge, and dissemination systems operational.	Integrated information system; baseline/mid-term/final evaluations; 25 products; 14 events; annual safeguards and gender reports.	Outputs 2.1: Strengthened capacity of institutions to understand and better address climate risks	Indicator 2.1: Institutions supported to strengthen capacity to understand and address climate risks and resilience [# of institutions, disaggregated by scale, by sector, and by type of institution]	528,407
		Output 3.2: Strengthened capacity of national and subnational stakeholders and entities to capture and disseminate knowledge and learning	Ind. Indicator 3.2: Climate resilience knowledge products and/or tools developed and shared with stakeholders [# of products/tools, by sector]	350,000
Total output level grant amount				8,733,591

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

A. Record of endorsement on behalf of the government²

Ms. Tiyamika Kanthambi Director, Debt and Aid Management Division Ministry of Finance and Economic Planning and Development, Malawi	Date: February 10, 2026
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B. Implementing Entity certification

I certify that this proposal has been prepared in accordance with guidelines provided by the Adaptation Fund Board, and prevailing National Development and Adaptation Plans 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 project/programme.	
Ms. Ganna Onysko Senior GEF, GCF, AF Coordinator Division of Funding Partner Relations Directorate of Global Partnerships and External Relations United Nations Industrial Development Organization - UNIDO Implementing Entity Coordinator	
<i>Ganna Onysko</i> Signature	Tel. and email: +43 1 26026 3708 TO: f.haidara@unido.org CC: gef@unido.org; glo@unido.org; g.onysko@unido.org
Project Contact Person: Alvin Tepo Togba, Industrial Development Expert	
Email: a.togba@unido.org CC: Mr. Kassahun K. Suleman, AF Project Development Expert kskassahun@gmail.com Mr. Fredrick Kongongo, Industrial Development Officer, F.KONGONGO@unido.org Ms. Advika Pandey, Project Associate, IET/CTP (a.pandey@unido.org) Mr. Heng Liu, Senior Technical Advisor, h.liu@unido.org	

Annex I: Letter of Endorsement by Malawi's Designated Authority

Telephone: 01 789 355
Telefax: 01 789 173
Telex: 44407
Email: finance@finance.gov.mw



MINISTRY OF FINANCE, PLANNING
AND DECENTRALISATION
P.O. BOX 30049,
CAPITAL CITY,
LILONGWE 3.

Ref: No. FIN/DAD/6/8/1

4th September, 2026

THE ADAPTATION FUND BOARD
C/O ADAPTATION FUND BOARD SECRETARIAT
UNITED STATES OF AMERICA

ENDORSEMENT FOR MALAWI ADAPTATION RESILIENCE FOR SUSTAINABLE AGRI-DEVELOPMENT (MARESA)

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

Accordingly, I am pleased to endorse the above project proposal with support from the Adaptation Fund. If approved, the project/programme will be implemented by UNIDO and executed by the Ministry of Agriculture, Irrigation and Water Development Malawi and UNIDO.

Yours sincerely,

A handwritten signature in black ink, appearing to read 'Tiya Mica'.

Ms. Tiya Mica Kanthambi
Director of Debt and Aid

**Ministry of Finance and Economic Planning and Decentralization
Republic of Malawi**

CC: Mr. Alvin Tepo Togba, Climate Technologies Division, UNIDO

Annex II: Summary of Initial Gender Assessment

This initial gender assessment provides a preliminary overview of gender-differentiated vulnerabilities, constraints, and opportunities relevant to MARESA. It is based on national statistics and literature and has informed the component targeting, quantified benefit targets, consultation approach, safeguards timetable, and monitoring provisions referenced throughout the Concept Note. A comprehensive, participatory gender assessment and Gender Action Plan will be completed during the full proposal stage.

Table A2-1. Initial Gender Assessment - Key Issues and Project Implications

Gender Issue	Key Findings	Implications for the Project
Climate vulnerability	Women face greater climate vulnerability due to unequal access to land, finance, information, and decision-making. Climate change is expected to exacerbate these inequalities.	Prioritize women and vulnerable groups in adaptation planning and investments.
Role in agriculture	Women contribute approximately 80% of subsistence agricultural production and constitute the majority of cross-border traders yet are concentrated in low-productivity activities.	Support women-led climate-resilient livelihoods and value addition opportunities.
Access to land and productive assets	Despite legal protections, customary land is largely controlled by men. Female-headed households typically cultivate smaller plots and have fewer assets.	Improve women's access to productive assets, technologies, and adaptation finance.
Access to finance	Women have lower access to formal financial services and rely primarily on informal savings groups.	Establish gender-responsive financing mechanisms and strengthen women's access to credit and investment.
Access to extension and climate information	Women face barriers to accessing extension services and climate information due to time constraints, mobility limitations, and social norms.	Deliver climate information and capacity-building through approaches that are accessible to women.
Decision-making and leadership	Women are underrepresented in local governance and adaptation decision-making processes.	Promote women's participation and leadership in community adaptation planning and governance structures.
Entrepreneurship and livelihood diversification	Women-led enterprises face limited access to capital, business networks, skills, and technical assistance.	Support women-led adaptation MSMEs and livelihood diversification initiatives.

The project adopts a gender-responsive approach aligned with the Adaptation Fund Gender Policy and is organized around four pillars:

1. Equitable access to adaptation solutions, finance, capacity building, and climate information.
2. Meaningful participation and leadership of women in community-based adaptation processes.
3. Economic empowerment through support to women-led enterprises and livelihood diversification.
4. Risk reduction by ensuring project interventions do not increase women's time burdens or create unintended adverse impacts.

The project will integrate gender considerations across all components and undertake a detailed participatory gender analysis during the Full Proposal stage to further strengthen gender-responsive design and implementation

Annex III: Summary of Stakeholder Consultations by District

Consultations comprised 45 completed Key Informant Interviews (KIIs) and 17 Focus Group Discussions (FGDs) with 155 FGD participants across seven target districts, conducted 27–31 August 2026.

District	Date	Participants (M/F)	Key Discussion Topics	Main Issues and Findings	How Reflected in the Proposed Project
Karonga	28–29 August 2026	18 participants comprising 8 KII participants (7M, 1F) and 10 FGD participants across 2 single-sex FGDs: a women's FGD (5 women, Mwahimba) and a youth FGD (5 participants, Mweneyumba)	Declining soil fertility and household income due to drought and floods; overpopulation, land encroachment and shrinking grazing land; unpredictable rainfall, flash floods on the Songwe and North Rukuru rivers, rising temperatures and fall armyworm pest pressure; over-dependence on donor relief; forest degradation and loss of protected escarpment reserves; declining potable water supply and need for solar-powered water systems and climate-resilient sanitation; women's recovery, alongside the need for solar-powered (rather than FGD participants noted men's greater access to borehole) water systems and climate-resilient latrines. Women's and control over productive assets.	Consultations identified declining soil fertility, erratic rainfall, flash flooding and heat stress as the primary drivers of falling crop yields and household food insecurity. An estimated 700 hectares of forest, including the Karonga North and South agriculture and forest/watershed restoration escarpment reserves, were lost in 2025 to charcoal burning, farmland expansion and brick-making, worsening water source depletion. Communities and duty-bearers highlighted high infrastructure under Outcome 3; and adaptation economic empowerment measures to reduce donor-relief dependence under Outcome 4.	Climate risk and WEF-nexus assessments and early-warning systems for flash floods and dry spells under Outcome 1; soil fertility restoration, climate-smart agriculture and forest/watershed restoration addressing the 700ha degradation under Outcome 2; climate-resilient, solar-powered water and sanitation infrastructure under Outcome 3; and adaptation economic empowerment measures to reduce donor-relief dependence under Outcome 4.
Chikwawa	28–31 August 2026	28 participants comprising 8 KII participants (8M, 0F) and 20 FGD participants across 2 mixed FGDs (10 participants each: 4M/6W in Kasisi and 3M/7W in Ngabu)	Overexploitation of forests and natural resources contributing to floods, erratic rainfall and biodiversity loss in the Shire River; need for local systems, schools (including in Chikwawa, Kakoma, Limphangwi and Nkhathhe) and rural infrastructure. Displacement following management; displacement, asset loss and disasters is deepening poverty and exposing households to waterborne disease following floods; waterlogging waterborne disease. Stakeholders identified weak local reducing cultivable land; damaged school and limited natural resource governance as key gaps, alongside infrastructure under Outcome 3; and livelihood systems; weak enforcement of conservation deserts through encroachment. FGD participants described bylaws amid population growth and land scarcity; living in constant fear of losing property or lives to flooding, and FGD participants raised institutional gaps in climate-technology support, including poor road district access and mobile-network coverage limiting adaptation technologies.	Recurrent flooding and heatwaves are washing away crops, waterlogging farmland and damaging solar-powered water systems, schools (including in Chikwawa, Kakoma, Limphangwi and Nkhathhe) and rural infrastructure. Displacement following tolerant, climate-smart agriculture under Outcome 2; flood-resilient and solar-powered water systems, flood-protection works and resilient school/market infrastructure under Outcome 3; and livelihood diversification to reduce disaster-driven displacement and poverty under Outcome 4.	Village-based natural resource management, local bylaws and early-warning governance under Outcome 1; Shire River watershed restoration and waterlogging-tolerant, climate-smart agriculture under Outcome 2; flood-resilient and solar-powered water systems, flood-protection works and resilient school/market infrastructure under Outcome 3; and livelihood diversification to reduce disaster-driven displacement and poverty under Outcome 4.
Zomba	29–31 August 2026	25 participants comprising 5 KII participants (3M, 2F)* and 20 FGD participants across 4 single-sex FGDs (10 men, 10 women; sessions held in Chombe and Namalaka)	Low agricultural yields driving food price increases; post-flood waterlogging causing sanitation and waterborne-disease outbreaks; declining soil fertility and price volatility limiting farmers' access to inputs; promotion of village savings, drought-resistant crops and cover crops as coping strategies; deforestation for firewood and charcoal linked to poverty; the geographic spread of climate impacts beyond historically affected Traditional Authorities; men's FGD participants linked poor harvests to malnutrition and disrupted schooling, and noted women bear the added burden of firewood collection.	Yield declines and waterlogging were identified as the central drivers of food price spikes and sanitation risk, with waterborne illness following floods. Climate impacts, previously concentrated in T/A Nkumanje, Lamusi, Mwambo and parts of Malemia and Mlumbe, are now affecting the district broadly. Deforestation for charcoal and firewood, driven by poverty, was flagged as both a cause and consequence of reduced resilience, while village savings groups and drought-resistant/cover cropping were noted as promising, under-resourced coping mechanisms. Communities also credited government-built evacuation centre and early-maturing crop varieties with reducing recent flood impacts.	Expanded community risk profiling covering newly affected Traditional Authorities under Outcome 1; soil fertility restoration, drought-resistant and cover cropping, and agroforestry to reduce charcoal dependence under Outcome 2; drainage and flood-management infrastructure to address waterlogging and sanitation risk, decentralized renewable energy to reduce firewood/charcoal reliance, and climate-resilient evacuation/community infrastructure under Outcome 3; and savings-linked adaptation finance and women- and youth-led enterprises under Outcome 4.
Machinga	24–31 August 2026	18 participants comprising 7 KII participants (4M, 3F) and 11 FGD participants in 1	Temperature and rainfall changes, flash floods, dry spells and drought; road and market infrastructure damage limiting commodity prices; deforestation as a coping strategy. Groundwater decline complicating borehole drilling and fuelling conflict over water points; food collapse is heightening cholera risk near Lake Chilwa and Lake	Damaged roads and market linkages are compounding low commodity prices and driving some farmers toward deforestation as a coping strategy. Groundwater decline is reflecting the matrilineal context, under Outcome 1; increasing water-point conflict, while flood-induced pit-latrine soil and water conservation for sandy soils and climate-resilient irrigation under Outcome 2; resilient	Climate information and early-warning systems for dry spells and flooding, with gender-responsive planning reflecting the matrilineal context, under Outcome 1; soil and water conservation for sandy soils and climate-resilient irrigation under Outcome 2; resilient

Annex 5 to OPG Amended in October 2017

District	Date	Participants (M/F)	Key Discussion Topics	Main Issues and Findings	How Reflected in the Proposed Project
		mixed FGD (3M, 8W)	insecurity linked to poor produce quality and prices; flood-related sanitation failure and cholera risk around Lake Chilwa and Lake Chiuta; sandy, low-nutrient soils; limited bargaining power for women farmers within the district's matrilineal marriage system; FGD participants raised social risks linked to water-point queuing.	Chiuta. Machinga's sandy soils limit soil-nutrient retention, and matrilineal land and marriage structures were reported to weaken women's bargaining power in unstructured produce markets, deepening the poverty-food-insecurity cycle. The FGD raised a serious protection concern: conflict over water-fetching queues, particularly in the early morning and after sunset, was linked by participants to family trust breakdowns and incidents of assault, underscoring the need for safe, well-sited water infrastructure.	market and water/sanitation infrastructure — including safe siting and lighting of water points to mitigate the protection risks raised in FGDs — to reduce cholera risk and groundwater conflict under Outcome 3; and women-led enterprise and market-access support under Outcome 4.
Mangochi	24–31 August 2026	27 participants comprising 7 completed KII participants (4M, 3F; 1 additional KII with WFP still pending response) and 20 FGD participants across 2 mixed FGDs (7M, 13W total)	Flooding in low-lying areas causing crop failure and malnutrition; rising Lake Malawi levels threatening riparian communities and arable land; shortened/delayed rainy seasons and frequent heavy rainfall linked to charcoal production, agricultural expansion and bush fires; adoption of drought-tolerant crops and conservation agriculture; damaged and silted irrigation infrastructure and high pumping costs; potential for solar energy in irrigation, agro-processing and youth enterprise; FGD participants noted women's continued exclusion from key community decision-making.	Rising Lake Malawi levels and recurrent flooding are eroding arable land and threatening riparian livelihoods, compounded by population pressure and construction encroachment. Irrigation infrastructure is undermined by siltation and unreliable dry-season water, while high pumping costs and limited technical/financial capacity constrain farmer adaptation. Stakeholders identified solar-powered irrigation and agro-processing as a strong opportunity to reduce firewood/charcoal dependence while creating youth entrepreneurship pathways, alongside a need for catchment, riverbank and hygiene interventions. FGD participants reported that although women participate in village meetings, VSLAs and farming groups, their influence over important decisions remains limited where traditional structures are male-dominated; drought-tolerant crops and improved soil management were ranked the top adaptation priorities.	Lake-level and flood early-warning systems and community risk assessments under Outcome 1; drought-tolerant cropping, conservation agriculture and catchment/riverbank restoration under Outcome 2; solar-powered irrigation and agro-processing, climate-resilient water systems and lakeshore flood protection under Outcome 3; and youth-led solar-energy enterprises, adaptation finance access and measures to strengthen women's participation in decision-making under Outcome 4.
Phalombe	29–31 August 2026	49 participants comprising 6 KII participants (6M, 0F) and 43 FGD participants across 3 FGDs: two women's sessions (28 women total, Namasoko and Paulo) and one youth session (15 participants, Tsekakhomo)	Unpredictable weather reducing harvests and household purchasing power; recommendations for afforestation and catchment conservation; drought-driven water scarcity and declining yields despite land expansion; need for mixed cropping, irrigation and crop diversification; delayed and shortened growing seasons causing crop failure and income loss; boreholes drying and long water queues; waterlogging after floods; proposals for crop diversification and expanded irrigation. Women's FGD participants highlighted gains from a local 50-50 gender-inclusion campaign.	Despite farmland expansion, yields and household food security continue to decline due to drought, a shortened growing season and unpredictable rainfall onset. Water scarcity is acute, with boreholes drying seasonally and communities queuing for hours, disproportionately burdening women. Stakeholders consistently called for catchment conservation, vetiver grass planting on mountainous areas, afforestation and dam construction to mitigate both flood and drought risk, alongside crop diversification and expanded irrigation. Women's FGD participants credited a local 50-50 campaign with improving representation in leadership positions, and called for transparent, funded reservation of management seats for women and youth to sustain this progress.	Early-warning systems for drought and dry spells, and support for adaptive planting calendars, under Outcome 1; mixed cropping, crop diversification, catchment conservation, vetiver grass planting and afforestation under Outcome 2; irrigation and water-storage/dam infrastructure and climate-resilient water points to reduce women's time burden, plus flood-mitigation drainage, under Outcome 3; and livelihood diversification finance and funded women's/youth leadership representation under Outcome 4.
Nsanje	29–31 August 2026	35 participants comprising 4 KII participants (4M, 0F)* and 31 FGD participants across 3 single-sex FGDs: a men's session (10, Benje), a youth session (10) and a women's session (11), both in Tengani/Nyamula	Water scarcity and contamination during floods, requiring longer travel for water; recommendations for solar-powered and motorized-pump irrigation with dedicated maintenance funding; limited access to credit and irrigation, shortened growing seasons and delayed planting; need for afforestation, forest protection, bushfire control and soil and water conservation; damage to water pipe infrastructure, schools, health facilities and markets from floods and dry spells; early positive results from community tree planting; women's and youth FGDs raised inheritance barriers and youth out-migration.	Flood and dry-spell damage to water pipe infrastructure was consistently reported, alongside limited access to credit and irrigation that is shortening growing seasons and delaying soil and water conservation building on early positive results, plus credit-linked climate-smart agriculture encouraging exception, with FGD and KII participants alike reporting reduced soil erosion and rising harvests where tree planting has already taken place. The youth FGD raised the high cost of improved seed as a barrier and called for customary inheritance practices that exclude women from land and assets to be revoked, linking women's asset control to poverty reduction and household stability. The women's FGD identified food shortages, flooding and damaged water infrastructure as the top burdens, and noted that limited local employment is driving youth relocation to cities.	Climate risk assessments informing flood-control and irrigation priorities under Outcome 1; afforestation and soil and water conservation building on early positive results, plus credit-linked climate-smart agriculture under Outcome 2; solar/motorized-pump irrigation rehabilitation, flood-control structures and resilient water, health, school and market infrastructure under Outcome 3; and expanded access to credit, women's livelihood opportunities to reduce out-migration under Outcome 4.

Photographic Record of Field Consultations



FGD with women groups in Chikwawa



Consultation in Zomba



Consultation in Nsanje



Other districts (Machinga, Mangochi & Phalombe)