

Annex-7: Risk Assessment and Action Plan Matrix

1. Introduction and purpose of the risk assessment

This annex presents the risk assessment and action plan for the proposed SAP project. It covers the principal risks that may affect project implementation, performance, fiduciary integrity, and sustainability, and identifies the mitigation measures that will be applied to manage those risks throughout the project lifecycle. The annex is intended to be read together with the funding proposal, the logical framework, the procurement plan, the Environmental and Social Action Plan, and the annex on Anti-Money Laundering, Countering the Financing of Terrorism, Sanctions Compliance, and Prohibited Practices. The assessment goes beyond environmental and technical risks and includes institutional, operational, financial, procurement, social, and integrity-related risks. In particular, it addresses the reviewer's request to include risks related to money laundering, terrorist financing, sanctions exposure, fraud, bribery, corruption, collusion, conflict of interest, diversion or misuse of project-financed goods and services, and other prohibited practices.

2. Project risk context

The project is designed to strengthen the climate resilience of vulnerable households in selected drought-prone localities of Ethiopia through an integrated package of climate-resilient planning, potable water access, solar-powered irrigation, watershed restoration, climate-smart agriculture, and livelihood diversification. It will be implemented through the Ministry of Finance, acting through the CRGE Facility, together with the designated federal Executing Entities, the Ministry of Water and Energy, the Ministry of Agriculture, and the Ministry of Irrigation and Lowlands, and their corresponding regional and woreda implementation structures.

This implementation model provides strong institutional ownership and alignment with Ethiopia's public systems, but it also creates a distinctive risk environment. The project involves decentralized execution across multiple sectors and levels of government, construction and infrastructure activities, procurement of goods and services, community-based implementation, local governance arrangements, and livelihood support to vulnerable households and groups. These features give rise to operational, coordination, fiduciary, and integrity risks that need to be managed through clear institutional arrangements, effective supervision, strong documentation, and regular monitoring.

The project does not envisage unrestricted cash transfers or on-granting of GCF proceeds to beneficiaries. Instead, support will reach beneficiaries through publicly implemented activities, infrastructure, in-kind support, productive inputs, technical assistance, training, and organized community-based support arrangements, including local revolving grant arrangements for selected livelihood activities. This reduces direct exposure to some financial crime risks, but it still requires careful management of risks related to targeting, diversion, misuse, procurement, and prohibited practices.

3. Risk assessment approach and methodology

The risk assessment is based on the project design, the Theory of Change, the logical framework, the implementation arrangements, the procurement structure, and the anticipated operating context in the target areas. It also draws on experience from earlier climate finance operations implemented through the Ministry of Finance and incorporates the issues raised by the GCF reviewers.

Each risk is considered in terms of its probability, potential impact, and the mitigation measures that are available within the project design. The matrix therefore distinguishes between the initial risk level and the residual risk expected after mitigation. The assessment recognizes that some risks, especially those associated with climate variability, decentralized implementation, procurement, and sustainability of local systems, cannot be eliminated entirely. The objective is therefore to reduce them to a manageable level through practical and proportionate controls.

The assessment also reflects the principle that risk management is continuous. Risks will not be assessed only once at appraisal stage, but will be reviewed and updated throughout implementation as circumstances evolve.

4. Institutional, operational, and technical risks

A first set of risks relates to the institutional and operational complexity of the project. These include the capacity of federal, regional, and woreda institutions to implement the project consistently, coordinate across sectors, manage reporting and documentation, and sustain infrastructure and community-based systems after installation. These risks are particularly relevant because the project relies on multiple public institutions operating through Ethiopia's decentralized governance structure.

The first-level assessment of the three Executing Entities indicates that they are established public institutions operating within the Ethiopian government system. The broader project risk matrix assesses Executing Entity capacity risk as medium. This rating does not reflect a finding of heightened money laundering or terrorist financing exposure. Rather, it reflects the practical challenges of decentralized implementation across multiple levels, including variable institutional capacity, documentation quality, procurement discipline, supervision, and coordination. These risks will be mitigated through MoUs and subsidiary implementation arrangements, annual work plans, supervision, technical support, steering committees, and periodic monitoring.

The project also faces technical and sustainability risks. These include the performance of water and irrigation infrastructure, uncertainty in water availability and groundwater use, local operation and maintenance capacity, adoption of climate-resilient technologies, and continued community use and maintenance of project-supported systems. These risks are addressed through detailed technical design, climate-informed assessments, water-balance analysis, groundwater planning, operation and maintenance training, spare parts provision, local user structures, and structured handover arrangements.

5. Fiduciary, procurement, and integrity risks

A second set of risks relates to fiduciary management, procurement, and integrity. Because the project includes infrastructure and construction, procurement of goods and services, consultant engagement, and decentralized delivery of benefits, it carries exposure to risks such as fraud, bribery, corruption, collusion, overpricing, false certification, conflict of interest, diversion of materials, misuse of assets, and weaknesses in contract management or documentation.

These risks will be managed through the public procurement and public financial management framework applicable to the project, supported by project-specific controls. Procurement processes will be documented and subject to the approved procurement plan. Procurement and contract management will include supplier eligibility checks, review of legal registration and tax compliance, conflict-of-interest management, segregation of functions, documented evaluation procedures, site supervision, milestone-based payments, and physical verification of outputs before payment. These controls are particularly important for infrastructure and construction, where risks are generally higher from an integrity perspective.

The project also includes risks related to money laundering, terrorist financing, sanctions exposure, and other prohibited practices. The overall inherent risk of ML/TF/PP is assessed as moderate, driven not by unrestricted cash transfers, but by the operational complexity of procurement, contracting, community-level support, and decentralized implementation. The project will manage these risks through sanctions screening, supplier due diligence, documentation controls, complaint channels, conflict-of-interest controls, audit and supervision, and periodic reassessment of integrity risks. No specific evidence has been identified suggesting that the three Executing Entities present a high inherent ML/TF risk; the more relevant concerns relate to control effectiveness and implementation discipline.

6. Beneficiary-level and downstream implementation risks

A third set of risks arises at beneficiary and community level. These include risks of mis-targeting, ghost beneficiaries, favoritism, exclusion of intended groups, diversion or misuse of inputs and equipment, and weak accountability in downstream implementation. These risks are relevant because the project includes support to vulnerable households, user groups, cooperatives, and community structures through infrastructure, productive inputs, training, and other forms of support.

To address these risks, the project will establish beneficiary eligibility criteria for the relevant activities and apply them through participatory and documented selection processes. These criteria will be developed in consultation with the Executing Entities at federal, regional, and woreda levels, as well as with project beneficiaries at kebele level. A cross-cutting principle will be to ensure an appropriate balance between men and women beneficiaries. Beneficiary verification will rely on local validation, registration records, selection documentation, and grievance mechanisms. The project's downstream

implementation arrangements will also include handover protocols, operation and maintenance agreements, participation records, community-level management arrangements, and local oversight structures.

Controls over materials, equipment, and technology will include receiving and inspection records, asset registers, installation and commissioning records, site verification, handover arrangements, and periodic monitoring. These measures are intended to ensure that project-financed goods and technologies are used only for intended purposes and are not diverted or misused.

7. Integrity risk governance and oversight arrangements

Overall responsibility for integrity risk management during implementation will rest with the Ministry of Finance / CRGE Facility. This includes compliance coordination, fiduciary monitoring, sanctions awareness, escalation of serious integrity issues, and oversight of risk reassessment. The designated federal Executing Entities will manage integrity controls within the activities under their mandates, while regional and woreda structures will provide first-line supervision, documentation, and monitoring.

The project will not establish a separate stand-alone PMU detached from government systems. Rather, day-to-day execution will be carried out through the existing public implementation architecture described in the proposal. Governance and oversight will be supported by the National, Regional, and Woreda Steering Committees, which will provide strategic oversight, implementation coordination, escalation, and follow-up on risks and bottlenecks.

The project will also maintain grievance and whistle-blower arrangements for the reporting of complaints and allegations of wrongdoing, including fraud, corruption, misuse of resources, favoritism, retaliation, and related concerns. These mechanisms will operate through project-level grievance channels, institutional complaint pathways, and escalation through government oversight arrangements where necessary. Confidentiality, need-to-know handling, and protection against retaliation for good-faith reporting will be applied in line with applicable procedures.

Conflict of interest risk is recognized as relevant to procurement, beneficiary selection, contract supervision, and local decision-making. The inherent conflict of interest risk is assessed as moderate, and the residual risk as low to moderate with mitigation. Mitigation measures include separation of functions, disclosure and recusal where appropriate, documented decisions, oversight by committees and supervisors, and use of complaint channels.

8. Ongoing risk review, monitoring, and updating

This risk matrix will be treated as a living management tool. Risks will be reassessed at project inception, during annual reporting, before major procurement actions, and whenever new counterparties, implementation modalities, incidents, complaints, audit

findings, or contextual changes arise. This includes review of procurement performance, fiduciary management, safeguards compliance, complaint data, supervision findings, and broader operating conditions.

Where new risks emerge, or where existing risks increase, mitigation measures will be revised accordingly and reflected in project management and reporting arrangements. The Ministry of Finance / CRGE Facility will coordinate this process, working in collaboration with the Executing Entities and the project steering committees. This ensures that risk management remains dynamic and responsive throughout the project lifecycle.

AML/CFT and broader compliance risk training will form part of this ongoing risk management approach. Relevant project stakeholders, particularly those involved in procurement, finance, safeguards, grievance handling, supervision, and beneficiary-facing activities, will receive training at project inception and periodically during implementation, with refresher sessions as needed.

Risk Assessment and Action Plan Matrix

Risk Description	Risk Category	Probability	Impact	Mitigation Measures	Monitoring Frequency	Responsible Entity/ies	Residual Risk
Climate variability and drought	Environmental / Operational	High	High	Promote drought-resilient crops, water harvesting, climate-smart agriculture, integrated watershed rehabilitation, water balance assessment, and climate-informed planning. Adjust sequencing where needed based on local climate conditions.	Continuous; formally reviewed semi-annually and annually	MoA, MoWE, MILLD, MOF/CRGE Facility	Moderate
Institutional capacity gaps	Institutional	Medium	Medium	Assign regional focal persons, use decentralized capacity-building plans, training-of-trainers, quarterly coordination, and steering committee oversight.	Quarterly	MOF/CRGE Facility, Executing Entities, regional bureaus, woreda offices	Low-Moderate
Executing Entity capacity, including integrity management capacity	Institutional / Operational / Compliance	Medium	Medium	Conduct annual performance reviews, joint supervision missions, targeted technical assistance, and periodic checks on procurement, fiduciary, and documentation practices. No specific	Semi-annually and annually	MOF/CRGE Facility, Executing Entities	Low-Moderate

Risk Description	Risk Category	Probability	Impact	Mitigation Measures	Monitoring Frequency	Responsible Entity/ies	Residual Risk
				high ML/TF risk identified, but operational integrity controls will be strengthened.			
Operation and maintenance (O&M)	Operational	Medium	Medium	Empower IWUAs and local water management committees, provide training, spare parts, handover arrangements, O&M protocols, and periodic maintenance audits.	Quarterly after asset delivery	MoWE, MILLD, regional and woreda offices, IWUAs	Moderate
Gender inequality and exclusion	Institutional / Social	Medium	High	Gender-responsive planning and budgeting, inclusive targeting, sex-disaggregated monitoring, leadership support, community engagement, and grievance access.	Quarterly	MOF/CRGE Facility, Executing Entities	Moderate
Foreign exchange constraints	Financial	Low	Medium	Use procurement buffers, plan procurement timing carefully, maintain USD-denominated account, and use local suppliers where feasible.	Quarterly	MOF/CRGE Facility, procurement entities	Low-Moderate

Risk Description	Risk Category	Probability	Impact	Mitigation Measures	Monitoring Frequency	Responsible Entity/ies	Residual Risk
Technical knowledge (solar / irrigation)	Technical	Medium	Medium	Develop local technician networks, provide certification training, technical support, supplier support, and South-South knowledge exchange where relevant.	Quarterly	MoWE, MILLD, MoA	Low-Moderate
Groundwater over-abstraction	Technical / Environmental	Low	High	Apply water-demand assessment, groundwater planning, indicative water balance analysis, and local water governance arrangements.	Semi-annually	MoWE, MILLD, woreda water and irrigation offices	Moderate
Borehole performance uncertainty	Technical / Operational	Medium	Medium	Require technical studies, hydrogeological assessment, siting controls, commissioning checks, and maintenance planning.	At design, commissioning, and periodic review	MoWE, contractors, woreda water offices	Low-Moderate
Supply chain delays	Logistical	Medium	Medium	Pre-qualify suppliers where appropriate, package procurement realistically, monitor milestones, and use strategic buffers.	Monthly during active procurement	Lead procuring entities, MOF/CRGE Facility	Low-Moderate
Security and political instability	Political / Operational	Low	High	Use conflict-sensitive implementation, regular context review, and	Quarterly and as needed	MOF/CRGE Facility, regional and	Moderate

Risk Description	Risk Category	Probability	Impact	Mitigation Measures	Monitoring Frequency	Responsible Entity/ies	Residual Risk
				flexible sequencing or relocation if needed.		woreda structures	
Vandalism and low community buy-in	Operational / Social	Low	High	Use participatory planning, community bylaws, local grievance channels, asset handover, and local governance structures such as Smart Village Committees and IWUAs.	Quarterly	Woreda offices, community structures	Moderate
Inflation and cost overruns	Financial	High	Medium	Use inflation-adjusted costing where appropriate, procurement buffers, prioritized sequencing, and periodic cost review.	Quarterly	MOF/CRGE Facility, Executing Entities	Moderate
Social resistance or low uptake	Social / Operational	Low	Medium	Conduct awareness-raising, local livelihood analysis, adaptive feedback, and participatory consultation.	Quarterly	MoA, MoWE, MILLD, woreda offices	Low-Moderate
Environmental degradation	Environmental	Medium	High	Enforce watershed management, area closures, afforestation, agroforestry, grazing management, and	Semi-annually	MoA, regional and woreda agriculture offices	Moderate

Risk Description	Risk Category	Probability	Impact	Mitigation Measures	Monitoring Frequency	Responsible Entity/ies	Residual Risk
				community-based restoration.			
Technology adoption barriers	Technical / Operational	Low	Medium	Use demonstration, peer learning, training, local champions, and package technology with practical support.	Quarterly	MoA, MoWE, MILLD	Low-Moderate
Delays in fund disbursement	Financial / Institutional	Medium	Medium	Align with fiscal calendars, use established federal-regional-woreda fund flow arrangements, and track disbursement schedules.	Quarterly	MOF/CRGE Facility, BOFEDs, Woreda Offices of Finance	Low-Moderate
Conflicts over access / rights	Social / Institutional	Low	Medium	Use community governance committees, participatory water allocation, grievance mechanisms, and local consultation.	Quarterly	Woreda structures, local committees	Low-Moderate
ML/TF and other prohibited practices relating to counterparties, vendors, procurement, and implementation arrangements	Compliance / Fiduciary	Low-Medium	High	Apply sanctions screening, supplier eligibility checks, due diligence on vendors and counterparties, procurement controls, documentation requirements, complaint channels, escalation procedures, and	At inception, before major procurement, annually, and when new risks arise	MOF/CRGE Facility, Executing Entities, procurement and finance units	Low-Moderate

Risk Description	Risk Category	Probability	Impact	Mitigation Measures	Monitoring Frequency	Responsible Entity/ies	Residual Risk
				periodic reassessment. The project does not envisage unrestricted cash transfers, reducing direct ML/TF exposure.			
Fraud, bribery, corruption, collusion, and contractor misconduct in procurement and construction	Procurement / Compliance	Medium-High	High	Use transparent procurement, sanctions screening, legal and tax checks, documented evaluation, segregation of duties, supervision, milestone-based payments, physical verification, and contract clauses on prohibited practices.	Continuous during procurement and contract execution	Lead procuring entities, procurement committees, MOF/CRGE Facility	Moderate
Beneficiary mis-targeting, ghost beneficiaries, favoritism, or diversion of livelihood support	Social / Compliance	Medium	Medium	Establish beneficiary criteria for all relevant activities, verify identities and eligibility through local validation and documentation, maintain registers, grievance channels, and community-level oversight.	Quarterly	Woreda offices, implementing entities, local committees	Low-Moderate
Diversion or misuse of procured goods,	Operational / Compliance	Medium	High	Maintain receiving records, asset registers, handover records, site verification, O&M	Quarterly	Executing Entities, woreda offices,	Moderate

Risk Description	Risk Category	Probability	Impact	Mitigation Measures	Monitoring Frequency	Responsible Entity/ies	Residual Risk
materials, and technology				controls, periodic audits, and local oversight to ensure use for intended purposes only.		local user structures	
Sanctions exposure, including future restrictive measures	Compliance	Low	High	Continuously screen relevant counterparties, vendors, and other stakeholders against applicable UN sanctions lists; update controls if future sanctions become applicable. No listed individual or entity will be knowingly involved in the project.	At onboarding, before contracting, periodically, and when context changes	MOF/CRGE Facility, procurement and compliance focal points	Low
Complaints and allegations not reported, or fear of retaliation	Governance / Compliance	Medium	Medium	Maintain project grievance and whistle-blower channels, ensure confidentiality, protect good-faith reporters against retaliation, and document follow-up and escalation.	Quarterly	MOF/CRGE Facility, grievance focal points, woreda and regional structures	Low-Moderate
Conflict of interest	Compliance / Institutional	Medium	Medium	Apply public service and procurement conflict-of-interest rules, require disclosure and recusal where needed, separate functions, document decisions, and use	Quarterly and whenever procurement/selection decisions are made	MOF/CRGE Facility, Executing Entities, procurement and	Low-Moderate

Risk Description	Risk Category	Probability	Impact	Mitigation Measures	Monitoring Frequency	Responsible Entity/ies	Residual Risk
				grievance and oversight channels.		governance bodies	
Weak compliance awareness among project actors	Compliance / Capacity	Medium	Medium	Provide AML/CFT, sanctions, anti-fraud, anti-corruption, conflict-of-interest, and documentation training at project inception and periodically during implementation.			