





Federal Democratic Republic of Ethiopia Ministry of Water and Energy Ethiopia Flood Management Project

Supervision and Contract Administration Terms of Reference For

- ToR 1.Fast Track Flood Risk ReductionWorks for Selected Sections inUpper Awash River Basin Works
- ToR 2.Fast Track Flood Risk Reduction
Works for Selected Sections in
Middle, and Lower Awash River
Basin Works

January 2025

Addis Ababa <u>Ethiopia</u>







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1. Introduction

Multiple government entities play their respective roles in flood risk management, requiring close coordination and joint implementation of flood risk management-related activities. The Ministry of Water and Energy (MoWE) and its PMU are the overarching institutions for flood risk management, mandated for water resource management, flood protection, forecasting, early warning, and the provision of meteorological services. It fulfills this mandate in coordination with a range of parastatal agencies and authorities structured under MoWE, including the Basins Development Offices (BDOs) and the Ethiopian Meteorology Institute (EMI). The BDOs are responsible for the major river basins, where they lead flood management efforts, including the construction, operation, and maintenance of flood protection measures (for example, river training, dikes, and retention basins), river and flow monitoring, and river basin development plans. Urban floods are under the responsibility of the Ministry of Urban Development and Infrastructure (MoUDI), resulting in coordination challenges related to the protection of cities from river floods and the encroachment of settlements into flood hazard areas. Weather and climate services are provided 'in-house' through EMI.

Infrastructures are constructed after major flood events, while the lack of financial resources and institutional capacity limit the geographic coverage and quality of those measures to adequately address the country's needs for flood protection. Relatedly, data infrastructure and services for early warning and stream flow monitoring have improved in recent years, but the geographic coverage of observation and gauging stations to provide sufficient and accurate forecasting remains low. The lack, and under-exploitation, of hydrometeorological services and data presents a fundamental impediment to flood risk assessment and the design of flood protection and drainage infrastructure, while poor monitoring and dissemination of early warning information limits the capacity of exposed populations to take precautionary measures in the event of flooding

The Ethiopian Flood Management Project will fill the critical gaps related to DRM and flood risk management, which has so far received limited attention despite floods having long been recognized for many years as one of the main disasters affecting the lives and livelihoods of the poor and vulnerable in Ethiopia. The Project follows a request from the Ministry of Finance, issued

in response to the 2020 rainy season flood events, for the World Bank's technical and financial assistance, including investments in flood protective measures in disaster-prone areas. The Project seeks to address Ethiopia's underlying DRM challenges and vulnerability to climate shocks by addressing urgent flood protection needs in select high flood-risk areas with vulnerable communities and by building the foundations to improve the DRM system for the longer-term disaster and climate resilience of the country. The Proposed civil works in Upper Awash basin will be financed by THE World Bank

1.1 Background

Flooding in Ethiopia has emerged as a significant challenge due to various anthropogenic and natural factors, including deforestation, urbanization, climate change, and inadequate flood management systems. The impacted regions suffer from substantial socio-economic disruptions, ecological damage, and threats to human well-being.

In Oromia Region Two One sub-basins (Upper Awash) have been identified in the Awash basin for urgent intervention:

Upper Awash sub-basin in Oromia region: Historically Upper Awash River basin is one of the country's sub-basins that suffered from recurrent floods. In the basin, flooding has been a critical problem. Flood events have recorded in Sebeta Hawas, Wolmera, Adama, and Egeria woredas in September 2020, Liben-Chuquala and Bora woredas in the years 2014, 2016, and 2017, at Fentale in 2012, 2015, and 2017, and currently in 2019 at Ilu causing thousands of people being affected and huge economical loss.

Damaging Impacts of Flooding: Infrastructure Damage: Floods can damage roads, bridges, and other infrastructure, disrupting transportation and access to essential services.

Agricultural Losses: Farmlands, crops, and livestock can be severely affected by flooding, leading to food insecurity and economic hardship for farmers.

Displacement and Loss of Life: In severe cases, flooding can force people to flee their homes, leading to displacement and, in some instances, loss of life.

Environmental Degradation: Floods can cause soil erosion, pollution of water sources, and damage to ecosystems.

The Ethiopian Ministry of Water and Energy has launched this consolidated project to enhance resilience against flooding in these areas through structural and non-structural measures, focusing on flood protection, infrastructure safeguarding, and community engagement.

2. Objective

The primary objective is to supervise and ensure the timely implementation of flood protection measures that align with technical, environmental, and social standards.

The specific objectives include:

- Enhancing resilience against flooding through structural and non-structural measures. and non-structural measures could be part of riverbank protection.
- Strengthening community engagement and awareness.
- Building the capacity of local stakeholders for long-term sustainability.

3. The Project area and Tentative interventions

The consolidated project covers three geographic Sub-basins:

Upper Awash: Located in the Oromia region Awash Basin, the area spans the flood-prone zones of the Awash River Illu, Sebeta Hawass, Dawo, ejersa Lefo, Ejere, and Adama woredas.

3.1. Project Description

The project is set in the Oromia regional state, strategically targeting crucial locations throughout the Upper Awash River basin. This initiative aims to safeguard vulnerable areas prone to flooding, protecting communities and ecosystems along this vital waterway.

3.1.1. Description of Upper Awash Sub-Basin

The Upper Awash River basin is one of the country's basins which suffered from recurrent floods. In the basin, flooding has been a critical problem. Flood events were recorded in Illu, Sebeta Hawas, Wolmera, Dawo, Ejersa Lefo and Egere woredas in September 2017,2019, and 2020 Liben-Chuquala and Bora woredas in the years 2014, 2016, and 2017, and 2020 at Fentale in 2012, 2015, and 2017, and currently in 2020 Most of the areas flooded causing thousands of people being affected and huge economical loss.

Ethiopia. According to a Socio-economic study, in 2017/2018, floods affected 8,477 households, more than 18,996 ha of agricultural land, 25,087 live stokes, infrastructures, and health and educational institutions. Schools in the upper Awash river basin often start late because of the flooding and health centers are not functional in the rainy season of the country.

The upper Awash River basin is located between longitude 8° 46' 24.6" to 9° 3' 18.8" N, and latitude 37° 57' 8.45" to 39° 17.24' 92" E (Fig. 1.1). The basin touches three regional states (Oromia, Southern Nations Nationalities and People (SNNP) and Amhara) as well as the surrounding of Addis Ababa city administration. It is surrounded in the west by the Abbay River Basin, in the southwest by the Omo-Gibe and Rift Valley Lakes Basin, and in the southeast by Wabi Shebele.

The geographic domain of the proposed flood protection project lies along the Awash River course starting from hot spots upstream including West Shoa Zone three woredas (Ejere, and Ejersa Lefo), South West Shoa Zone two woredas (Illu Sebeta Hawass, and Dawo), up to immediate upstream of Koka Dam and East Shoa Zone Adama Woreda downstream of Koka dam. The major tributaries upstream of the Koka Dam include Kebena, Great & Little Akaki, Mojo, Holeta, Alito, Teji, Gilo and Kelina rivers

3.1.2. Tentative Scope of Physical and Non-physical Interventions

The following interventions are proposed as part of the initial scope:

I. Implementation of Flood Risk Reduction Physical Interventions:

Erect structures to manage and control floodwaters effectively, reducing the impact of flooding.

1) **Dredging**

Remove accumulated sediments to maintain the river's flow capacity and prevent blockages, ensuring smooth water flow.

2) Channel Widening

Adjust river channels to improve water flow and reduce the risk of flooding. This includes widening and deepening sections of the river.

3) Riverbank Stabilization

Implement measures to stabilize riverbanks using a variety of techniques such as vegetation planting or gabions.

• Gabion works with a rock to floodplain and River bed:

Deploy gabion structures for bank stabilization to prevent erosion, maintain channel integrity, and provide additional support and stabilization to riverbanks.

Vegetation Planting:

Plant appropriate vegetation on slopes, where applicable, to control erosion and enhance environmental sustainability, contributing to the overall health of the ecosystem.

4) Crossing Structure Possible Ford or Culverts

When it comes to river crossing structures, both fords and culverts are viable options as per the river dimension and the flow of water to be implementing

Description of project interventions

This table summarizes the different components involved in the flood protection projects for each site, including the specific activities and their respective measurements.

Item No	Activities Description	Unit	Upper Awash	Remark
1	Channel Widening	km	61.4	Both River Bank sides
2	Dredging	km	72.6	
3	River Bank Stabilization			
3.1	Gabions with a rock to river bed (T100)	Km	1.5	
	Gabions with rock to floodplain (T100)			
3.2	Rock to the riverbed	km		
	Rock to floodplain			
3.3	Plant vegetation on slopes and river bank	Km	6.5	
4	Crossing Structure Possible Ford or Culverts	No	2	
Total		km	150	

Table 1. Summary of the work items in each specific project

4. Scope of Services, Tasks, and Expected Deliverables

4.1. Scope of Services

The consultant will be responsible for:

- Reviewing the contractor's work schedule required and contractor deliverables.
- Supervising construction and ensuring adherence to technical specifications.
- Monitoring compliance with the Environmental and Social Management Plan (ESMP).

4.2. Duration of the Project

The project completion is anticipated within a total duration of 6 months. The project encompasses two distinct components:

- Upper Awash Basin (Adama Woreda) flood protection project
- Upper Awash Basin (Illu, Dawo, Ejersa Lefo, Ejere, and Sebeta Hawass) flood protection project

The construction phase for each site will take 6 months, ensuring construction supervision activities are completed within the 6-month timeframe.

4.3. Scope of Civil Work

It covers two sites as explained in the earlier scope and is to be implemented in 6 months for each site

Clearing of sites

Top soil within 10cm depth and 5m width near river banks that may include shrubs, grass, and vegetation

River dredging and widening

It is the main activity that silt deposited or accumulates inside the river channel and it will be dredged and widening of the channels for a uniform flow of water and reduction of overtopping from the river channels

Disposal of dredged material

the dredged material will be transported and disposed of up to 1km away from the river channels avoiding any potential negative effects that may have back effects.

Gabion works with a rock to floodplain and River bed(T100)

Suitable on floodplain for wide enough with high protection is required

Rock to river bed, and floodplain works

Riprap (mixed) is a layer of large stones that protects soil from erosion in areas of high or concentrated flows and creates floodplains that can absorb excess water during floods, reducing the impact on surrounding areas.

Crossing Structure Possible Ford or Culverts

- Fords are shallow places in a river or stream where vehicles can drive across. They can be natural or improved with materials like concrete or rock
- Culverts are structures that allow water to flow under similar obstructions. They can be made from concrete, steel, or plastic

Vegetation covers

Slope protection with vetiver grass to reduce erosion

5. Consultancy Services

The general scope of the consultancy services is to assist flood protection listed under the scope of works in simultaneously with monitoring, on-site supervision, management of the works contract and flood protection works supervision including time control, cost control and quality control aspects of the works environmental and social management compliance.

For this purpose, the consultancy firm will provide a team of experts, experts at site and office levels during the period for supervision of the works contract.

5.1. Project Supervision

5.1.1. Site handover

- Issuance of site handover notice to the Contractor(s) as per the general conditions of the contract in coordination with the beneficiaries.
- * Mark out the benchmarks within the site

5.1.2. Review of Contractor's Implementation Schedule

- The Contractor's work methodology & Schedule shall be reviewed thoroughly by the Consultant.
- Interrelations between the various activities shall be carefully reviewed particularly concerning time allocation, commencement, and completion dates.
- At the end of this procedure, an agreed implementation schedule should be provided by the contractor(s) to the satisfaction of all parties.

 Review and approve the Physical, Machinery, Equipment, Manpower, and financial flow Schedule of the contractor as per the contract agreement document.

5.1.3. Supervision and Contract Administration of Works

- The Consultant shall review and recommend for approval the contractor's detailed work program, method statement for flood protection works and commissioning, availability, and ensuring the adequacy of contractors' inputs in terms of machineries or output, equipment, machinery, and human resources in accordance with the provisions contained in the work specifications / general conditions of contract / particular conditions of contract.
- The Consultant shall provide the necessary supervisory staff to be employed during the period of implementation in executive and supervisory capacities in respect of the contracts.
- The Consultant shall check and evaluate the contractor's mobilization on site with respect to machinery and personnel related to the project flood protection as per the provisions of the contract and their suitability and acceptability on site within the framework of the work and advise the PMU for granting permission to start the work.
- The Consultant is responsible for checking and setting out the alignment of the river channel, and other related works as per engineering practices based on the dimensions and data provided in the approved on the ground.
- The Consultant shall supervise the works that are executed by the contractor on a day-today basis and ensure that all the works are executed as per the technical specifications and in respect to the work schedule, as per the specified timeline and cost.
- The Consultant shall Monitor and enforce, as detailed in the Contractor's Safety Manual, the measures established to ensure the safety of the workers, other project personnel, the general public, the works in particular and the environment in general.
- The Consultant is responsible in efficient contract management, time control, quality control and cost control by monitoring all clauses of the Contract scrupulously.
- The consultant is responsible to write daily site diary which shall record all events pertaining to the administration of the Contract, requests from and orders given to the Contractor, and any other information which may at a later date be of assistance in resolving queries concerning execution of the works;

- The Consultant shall check the Bi-weekly, Monthly Progress and Final project completion Reports prepared by the contractor and prepare in agreed formats for the project (each subproject) in a suitable project monitoring software, including physical and financial progress, variations, time extensions, problems and risk analysis issues, etc...
- The Consultant is responsible for checking all quantity measurements and calculations required for payment purposes and ensuring that all measurements and calculations are carried out in an acceptable manner and at the frequencies specified in the contract documents;
- The Consultant is responsible for evaluating and processing contractors' requests for interim payment;
- The Consultant is responsible for identifying problems including delays and recommend to the PMU about action(s) to expedite progress if the works fall behind schedule;
- The consultant is responsible for advising to interpret and apply various provisions of the contract documents with respect to the Contractor's conformance and compliance with his contractual obligations in general and with respect to compensation events leading to time extension, variations, additional compensation or payment of extra cost and disputes raised by the Contractor in particular and recommending appropriate decisions;
- The consultant is responsible for preparing detailed activities and recommendations to the PMU for contract change orders and addenda, as necessary, to ensure the best possible technical results are achieved within the budget available as per the client's order
- The consultant is responsible for advising the Contractor to carry out all such works or to do such things as may be necessary in his opinion to avoid or to reduce the risk of any emergency affecting the safety of life or the works or adjoining property;
- Advice the client in checking the As-Built and as per the given standards that are submitted by the contractor on completion of work;
- The Consultant is responsible for the preparation of the completion report of the whole work; The Consultant is responsible for conducting provisional taking over of the project together with the client and contractor;

Table 2.Professional Requirement

No.	Job Title	#	Qualification &	Specific Experiences	General	Time

			Education		Experience	(Months)
1	Resident Engineer	1	MSc in Civil or Hydraulic Engineering or related fields	Supervision of integrated flood management projects, Project manager or resident Engineer	15+ years	6
2	Site Engineer	3	BSc in Civil or Hydraulic Engineering or related fields	Construction of hydraulic structures and flood mitigation works	10+ years	18
3	Quantity surveyor	2	BSc in Civil Engineering or Quantity Surveying or related fields	Quality control and quantity measurement for infrastructure projects	10+ years	12
4	Senior Environmentalist and social specialist	1	MSc or BSc in Environmental Science or a related discipline	Environmental safeguard compliance and monitoring donor donor-financed Projects	10+ years	6
5	Surveyor	3	BSc in Surveying or Geomatics or related fields	Conducting topographic and land surveys for flood management projects	10+ years	18

6. Specific tasks of staff

6.1. Resident Engineer

- Review and approve the flood protection methodology and schedule submitted by the contractor;
 - Implement. flood protection management system for the works;
 - Check contractors' setting out;
 - Taking measurements for the purpose of certifying payments and claims; •
 - Quantity control of the machineries or output and works;
- Coordination with the relevant authorities and/or stakeholders on-site during. flood protection;
 - Keep daily records of all aspects of the supervision works;
 - Approve the machineries or output and equipment brought by the contractor
 - Monitor the environmental impact during. flood protection;
 - Check monthly measurement of work and certify payment;
 - Ensure that complaints from the public and other stakeholders are attended
 - expeditiously and take the necessary action to resolve any conflicts arising;
 - Ensure that any dispute arising with day-to-day work is resolved at site level;
 - Advise PMU on claims, disputes, and defect corrections certification;
 - Report progress, trends that are likely outcome of contracts, and other information required to the Client's Project coordinator/delegated Engineer.
- ✤ Assist the site Engineer and other staff in the day-to-day management of flood protection works and related activities.
- * Assist all staff in planning, control, and management of the teams' work.
- Assist in monitoring progress, evaluating results, and identifying and resolution of constraints.
- ***** Prepare reports including inception, monthly, end-of-season and final reports.
 - Assist in developing a flood protection management system for the works;
 - Assist in developing a Quality assurance & control plan.

6.2. Quantity Surveyor/Engineer

Responsibilities of the Quantity Engineer will include but not limited to the following:

Report to the Resident Engineers;

- Carry out joint measurement of quantities for verification of contractor's interim and final statements;
- Based on these measurements, make verification on eligible Payments to the contractor;
- maintain a full record of payment data related take-off sheets, flood protection activities and as-built drawings and survey data
- undertake all the drafting activities; prepare topographic maps and drawings where necessary;
- ✤ delivers appropriate payment-related data; and
- ✤ Give assistance in contract administration.
- Review and approval of the contractor's detailed Quality assurance & control plan for different components of work in accordance with contract provision;
- Supervising and monitoring the Contractor's activity to ensure satisfactory standards, quality assurance, control of workmanship and progress
- Review the suitability of sources of machineries or output and their quality based on inspection, test results, and/or manufacturer's certificates;
- Check Contractor's machineries/equipment as per standard frequency specified in relevant specifications and impart training to Contractor's personnel to conduct different tests;
- The QC Engineer shall check all the records required to be maintained by the contractor as per the quality assurance plan periodically;
- Assist the Project Manager's representative in checking and approving schedules given by the contractor as per the agreed and approved;

6.3. Senior Surveyor

Responsibilities of the Senior Surveyor will include but not limited to the following:

reports to the resident engineers;

- prepare and oversee all the survey work during the. flood protection period;
- Carry out joint measurement of quantities for verification of contractor's interim and final statements;
- Coordinate and manage the survey team during. flood protection period.
- Maintain a full record of survey data's

6.4. Site Engineer

Responsibilities of the Site Inspector will include but not be limited to the following:

- ✤ Reports to the resident engineers;
- Follow up on on-site activities and keep track of the work progress and quality of performance in compliance with the technical specifications;
- Act as focal points for the Resident Engineers and other key staff for day-to-day monitoring of the site activities;
- Assistant Resident Engineers in preparing relevant records, work measurements, collecting and keeping the records for use by the Contract Specialist in resolving claims and disputes, preparation of progress reports, financial statements, etc.

6.5. Environmental and Social Specialist

6.5.1. Environmental Specialist

The environmental specialist will be available at the construction site during the construction stage. The specialist will

- Manage the implementation and management of all environmental safeguard activities under the ET-FMP in Upper Awash project sites,
- Create a detailed action plan that includes environmental monitoring checklists to ensure that the environmental management system in accordance with the environmental and social risk management instruments is established, implemented, and maintained.
- She/he will ensure environmental risks and impacts are managed during the construction works,

- Provide training and briefings to ensure that contractors and workers are aware of environmental and social risk regulations, standards, and requirements of the government and the World Bank,
- Ensure baseline monitoring and reporting of contractor's compliance with contractual environmental and social risk and impact mitigation measures during the supervision stage.
- Assist the contractor in developing and implementing detailed sub-project-specific contractor environment management plans (SSEMPs) for civil works and activities under the ET-FMP project, OHS plan, and community health and safety measures,
- Lead in the oversight of the implementation of environmental risk management and compliance with the Government and World Bank (ET-FMP) environmental and social framework in consultation with the PMU and ET-FMP management unit.
- Ensure that the preparation/design and implementation of all project activities are fully aligned with the country's regulations and the project's Environment and Social Management Framework (ESMF),
- Assess and approve the use of temporary construction areas identified during construction such as camps, laydown areas, access roads, etc.
- Monitor environmental safeguards during construction including ambient environmental monitoring (air quality, soil quality, water quality, and noise levels) in accordance with national laws, World Bank guidelines, and international best practices and on ESHS performance of the contractor as set in the site-specific ESMP.
- Evaluate the contractor's submitted works activities and schedules relative to the requirements of the approved SSEMPs.
- Provide sufficient detail regarding the incident or accident that occurred during the construction of ET-FMP (if any), indicating immediate measures taken or that are planned to be taken to address it,
- Estimate the volume of dredged material/waste to inform evaluation of dredged waste disposal before initiation of dredging activities, and assess and select proper waste disposal option for removing the dredged waste,
- Prepare reports on ET-FMP environmental compliance performance, including progress reports and completion reports.in separate from the main task

6.5.2. Role of Social Specialist

Carry out the following activities consistent with the Works contract to be supervised, including but not limited to the following

- Conduct community and stakeholder consultations regarding the social impacts and grievances that might be faced during the implementation of fast-track works
- Conducting social impact assessment to identify project-affected people and prepare mitigation for the social impacts and consult contractors and stakeholders
- support the Works employer to organize a SEA/SH conference, ensure appropriate representation at the conference, and follow up on any agreed actions by the attendees;
- monitor contractor's compliance with its SEA/SH Prevention and Response Obligations in the Works contract, and take appropriate contractual actions if non-compliance is identified, including upon identification of potential non-compliance by a dispute board;
- ensure that any allegation of SEA and/or SH that are received by the Consultant are documented, maintaining appropriate confidentiality, and promptly submitted to the Employer and the Contractor;
- before its engagement for the Works, verify that any proposed subcontractor not named in the contract, is qualified in accordance with the provisions of the SEA/ SH performance declaration for sub-contractors;
- provide appropriate support and relevant documents that a dispute board may need in reviewing SEA/SH contractual compliance
- Supervising the contractor/s regarding the provision of safeguard training and community awareness-raising
- Consult on the adherence t and implementation of environmental and social management included in the contractual agreement of the supervising consultant and contractors
- Monitoring the progress and preparing reports on social issues, consultations, impacts, implementation of mitigations, grievances arise and management of complaints and stakeholders participated in handling complaints in the process of implementation of fasttrack works

7. Progress Reporting and Reviews

7.1. Progress reporting:

The Consultant shall prepare as of the World Bank standards and submit bi-weekly, monthly reports of the works, for each site independently including:

- Information on measurements of works executed,
- Machineries supplied to site; used and/or stored
- Flood protection machineries or output and equipment;
- ✤ Variation orders, if any;
- Payments made to the Contractor(s),
- ✤ Acceptance tests of machines,
- Problems encountered and recommendations made by the consultant,
- Photographs showing the progress of the works.
- The Consultant shall also prepare and submit the seasonal report at the end of each working season describing the progress of the works package-wise and indicating the problem areas and actions required to overcome accordingly.
- The Consultant shall also prepare and submit a Package Completion Report on completion of the all work.
- The Consultant shall prepare and submit inception reports describing the working methodology and work program for the services within one month of the mobilization period.
- The Consultant shall prepare and submit the final report of the services on completion of the Services and shall advise on the issue of the provisional and final hand-over certificates.
- The Consultant shall arrange site meetings with Contractor(s) at regular intervals to discuss progress and quality of works, and resolve any pertaining problem.
- The Consultant shall issue Variation order and claims for extension of time or any change in works, if any, based on to the contract after obtaining the approval from the Client. The Consultant shall also monitor the contract costs relative to the Client's budgetary provisions.

7.2. Schedule of Reporting and Deliverables

All reports should be submitted as required below and in an electronic and hard copy format

- At the completion of the project the Consultant shall provide to the Client, free of charge, a full copy of the drawings recording any changes in the original working drawings.
- The Consultant is responsible for providing information and reports on the ongoing activities and progress of work.

The consultant is required to submit, for each sub-project, the following reports to the PMU.

- ✓ Inception report in 3 (three) copies plus a soft copy, one week after the issue of the letter for commencement of work. This report should include the related work arrangements, the staff deployment schedule, and details of the program of work.
- Assessment Report on the Baseline condition of the project site in parallel to construction works
- ✓ Environmental and Social Compliance Performance progress and completion Report
- ✓ Minutes of Community and Stakeholder consultation meetings
- ✓ Quality Assurance Plan in 3 (three) copies plus a soft copy one week after the commencement of work.
- ✓ The report should include the type and nature of quality control tests to be conducted, acceptance criteria, frequency of tests, standard observation sheets, and documentation based on approval. flood protection tender document.
- ✓ Progress reports in 3 (three) copies plus a soft copy at monthly intervals and at the end of each. flood protection season, summarizing the financial situation of all work and contracts, progress achieved, difficulties encountered and issues to be resolved,
- Project Completion Reports on completion of each package in 3 (three) copies plus a soft copy.

7.3. Review & Coordination Meetings

Weekly review meeting with the consultant, contractor and client to review and evaluate the progress of the work as per the schedule submitted by the contractor on a weekly basis which is cascaded from the master schedule.

- To give a solution for any problem encountered during the execution of the flood protection activities, the minutes of the meeting signed and sealed will be attached to the monthly report and distributed to all parties.
- Monthly review and coordination meetings shall be held with the Consultant's team leader; expert team members and representatives of contractors shall be held with the Project Manager/ Superintending Engineer to review the flood protection works.
- Quarterly review and coordination meetings with the Consultant's team leader expert team members and contractors shall be held with the Client's PMU at the site or head office in order to review the implementation and progress of the assignment.
- All the suggestions and comments that are made during such meetings shall be taken into consideration and implemented by the respective parties.

7.4. Environmental Safeguards Compliance

carry out the following activities consistent with the Works contract to be supervised, including but not limited to the following:

- (a) support the Works employer to organize an SEA/SH conference, ensure appropriate representation in the conference and follow up on any agreed actions by the attendees;
- (b) monitor contractor's compliance with its SEA/SH Prevention and Response Obligations in the Works contract, and take appropriate contractual actions if noncompliance is identified, including upon identification of potential non-compliance by a dispute board;
- (c) ensure that any allegation of SEA and/or SH that are received by the Consultant are documented, maintaining appropriate confidentiality, and promptly submitted to the Employer and the Contractor;
- (d) prior to its engagement for the Works, verify that any proposed subcontractor not named in the contract, is qualified in accordance with the provisions of the SEA/ SH performance declaration for sub-contractors;
- (e) provide appropriate support and relevant documents that a dispute board may need in reviewing SEA/SH contractual compliance

8. Consultant's Office and Equipment:

- The authorized officials of the Client may visit the Consultant's offices any time during office hours for inspection and interaction with the Consultant's Personnel.
- It is not expected from the Consultant to carry out the operations from the Head/Home Office.
- The Consultant shall mobilize and demobilize its Professional Personnel and Support Personnel with the concurrence of the Client's PM and shall maintain all Personnel's timesheets/ attendance sheets.
- These time sheets/ attendance sheets shall be made available to the Client as and when asked for and a copy of such record shall be submitted to the Client bi-weekly

9. Schedule

The flood risk reduction work is intended to be completed for the **Upper Awash within Six (6) Months**. The consultant is expected to distribute the resources used for the service according to logical patterns and manners.

10. Client's Input and Counter Part Personnel

The following are the inputs and facilities to be provided by the Client;

- Access to all available reports, studies, data, maps, and institutions relating to the works, including contractors' contracts for works
- ✤ Access to all sites for surveys and investigations.
- ✤ Facilitating all contacts necessary for the proper implementation of the project.

The Client or Project offices may assign its staff to the Consultant





Map 1. Location map of Upper Awash Adama woreda project site



Map 2. Location map of Upper Awash Illu woreda flood Intervention project site



Map 3. Location map of Upper Awash Dawo & Ejersa Lefo woredas flood Intervention project site



Map 4. Location map of Upper Awash Ejere woreda flood Intervention project site







Federal Democratic Republic of Ethiopia Ministry of Water and Energy Ethiopia Flood Management Project

Supervision and Contract Administration Terms of Reference For

Fast Track Flood Risk Reduction Works for Selected Sections in Middle, and Lower Awash River Basin Works

January 2025 Addis Ababa <u>Ethiopia</u>

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1. Introduction

Multiple government entities play their respective roles in flood risk management, requiring close coordination and joint implementation of flood risk management-related activities. The Ministry of Water and Energy (MoWE) and its PMU are the overarching institutions for flood risk management, mandated for water resource management, flood protection, forecasting, and early warning, and the provision of meteorological services. It fulfills this mandate in coordination with a range of parastatal agencies and authorities structured under MoWE, including the Basins Development Offices (BDOs) and the Ethiopian Meteorology Institute (EMI). The BDOs are responsible for the major river basins, where it leads flood management efforts, including the construction, operation, and maintenance of flood protection measures (for example, river training, dikes, and retention basins), river and flow monitoring, and river basin development plans. Urban floods are under the responsibility of the Ministry of Urban Development and Infrastructure (MoUDI), resulting in coordination challenges related to the protection of cities from river floods and the encroachment of settlements into flood hazard areas. Weather and climate services are provided 'in-house' through EMI.

Infrastructures are constructed after major flood events, while the lack of financial resources and institutional capacity limit the geographic coverage and quality of those measures to adequately address the country's needs for flood protection. Relatedly, data infrastructure and services for early warning and stream flow monitoring have improved in recent years, but the geographic coverage of observation and gauging stations to provide sufficient and accurate forecasting remains low. The lack, and under-exploitation, of hydrometeorological services and data presents a fundamental impediment to flood risk assessment and to the design of flood protection and drainage infrastructure, while poor monitoring and dissemination of early warning information limits the capacity of exposed populations to take precautionary measures in the event of flooding

The Ethiopian Flood Management Project will fill the critical gaps related to DRM and flood risk management, which has so far received limited attention despite floods having long been recognized for many years as one of the main disasters affecting the lives and livelihoods of the poor and vulnerable in Ethiopia. The Project follows a request from the Ministry of Finance, issued

in response to the 2020 rainy season flood events, for the World Bank's technical and financial assistance, including investments in flood protective measures in disaster-prone areas. The Project seeks to address Ethiopia's underlying DRM challenges and vulnerability to climate shocks by addressing urgent flood protection needs in select high flood-risk areas with vulnerable communities and by building the foundations to improve the DRM system for the longer-term disaster and climate resilience of the country. The Proposed civil works in the Middle and Lower Awash basin will be financed by the World Bank

1.1 Background

Flooding in Ethiopia has emerged as a significant challenge due to various anthropogenic and natural factors, including deforestation, urbanization, climate change, and inadequate flood management systems. The impacted regions suffer from substantial socio-economic disruptions, ecological damage, and threats to human well-being.

In Afar Region, two critical sub-basins (Middle, and Lower Awash) have been identified in the Awash basin for urgent intervention:

Middle Awash sub-basin in Afar Region: These areas in the Awash Basin are vulnerable to recurrent seasonal flooding due to sedimentation, land degradation, and erratic rainfall. These factors jeopardize agricultural productivity and community safety. The 2020 floods in the Middle Awash region of Ethiopia had a significant impact. The flooding, caused by the overflow of the Awash River, affected around 240,000 people in the Afar region. Additionally, almost 20,000 people were displaced and Approximately **60,000 hectares of crops and farmland** were damaged due to the flooding. The floods also caused extensive damage to infrastructure, including the destruction of schools, roads, bridges, and farmland

Lower Awash sub-basin in Afar Region: The Lower Awash sub-basin in Ethiopia is prone to flooding, particularly during the rainy seasons. These floods can cause significant damage to infrastructure, agriculture, and livelihoods. Recent Flooding Events In 2020 a major flood event occurred in the Lower Awash, impacting thousands of people and also, 2022 Another significant flood event took place, affecting communities and agricultural lands in the region.

Damaging Impacts of Flooding: Infrastructure Damage: Floods can damage roads, bridges, and other infrastructure, disrupting transportation and access to essential services.

Agricultural Losses: Farmlands, crops, and livestock can be severely affected by flooding, leading to food insecurity and economic hardship for farmers.

Displacement and Loss of Life: In severe cases, flooding can force people to flee their homes, leading to displacement and, in some instances, loss of life.

Environmental Degradation: Floods can cause soil erosion, pollution of water sources, and damage to ecosystems.

The Ethiopian Ministry of Water and Energy has launched this consolidated project to enhance resilience against flooding in these areas through structural and non-structural measures, focusing on flood protection, infrastructure safeguarding, and community engagement.

2. Objective

The primary objective is to supervise and ensure the timely implementation of flood protection measures that align with technical, environmental, and social standards.

The specific objectives include:

- Enhancing resilience against flooding through structural and non-structural measures. and non-structural measures could be part of riverbank protection.
- Strengthening community engagement and awareness.
- Building the capacity of local stakeholders for long-term sustainability.

3. The Project area and Tentative interventions

The consolidated project covers two geographic Sub-basins:

Middle and lower Awash: Located in the Afar region Awash Basin, Includes Dulessa, Amibara, Haruka, Gewane, Gelehalo Woredas Middle Awash River basin and

Middle and lower Awash: Located in the Afar region Awash Basin, includes Dubti, Asayta, and Afambo Woredas in Lower Awash Basin.

3.1. Project Description

The project is set in the Afar regions, strategically targeting crucial locations throughout the Middle, and Lower Awash River basins. This initiative aims to safeguard vulnerable areas prone to flooding, protecting communities and ecosystems along this vital waterway.

3.1.1. Description of Middle Awash Sub-Basin

The project area Middle Awash is located along Awash River on both sides including Amibara Haruka and Dulecha Weredas bounded by geographic coordinates 622899 m E to 643427mE and 1017607m N to 1056137m N. The location along the Middle Awash River basin and its sub-basins focuses on flood protection works. Between the Awash Station and the Gedebassa swamp (Hertale Station) major tributaries, the Kesem and the Kebena, enter the Awash originating from western highlands after passing through deeply incised gorges. From the eastern side, the Herdini River joins the Awash. The middle awash part of the project that focuses on Amibara, Haruka, Dulecha, Gewane, and Gelealo Woredas is located in this area.

The Middle Awash River basin is one of the country's basins that suffered from recurrent floods. In the basin, flooding has been a critical problem. Flood events recently were recorded in Amibara, Dulessa, Haruka, Gewane, and Gelehalo woredas in 2020 G.C. The Awash River had preceded huge damage in the Afar region, particularly in the middle Awash areas. The fact that, following the flood, irrigation infrastructures were broken, and many households were displaced from their areas in addition to losing their properties eventually they were exposed to different kinds of problems, such as water diseases, and remained to expect food aid from the government for so long. Different efforts have been made to alleviate the problems including flood protection works; however yet most of the problems remained unsolved emanating from the nature of the problem

3.1.2. Description of Lower Awash Sub-Basin

The Lower Awash Basin, located in the Afar Region of northeastern Ethiopia, is a flood-prone area. Here are the geographical coordinates for a central point in the Lower Awash basin: Latitude: 11.0° N Longitude: 40.5° E. This region is part of the Great Rift Valley and is known for its susceptibility to flooding due to the overflow of the Awash River, especially during the rainy season.

The flood hazard and risk assessment for the Lower Awash Sub-Basin indicates that a significant portion of the area is subjected to varying levels of flood hazards. Specifically, 5% of the area is subjected to low flood hazards, 23% to moderate flood hazards, 39% to high flood hazards, and 33% to very high flood hazards (*Source Awash basin plan*).

Lower Awash sub-basin is known for flash and river floods affecting inhabitants, infrastructures, small to large-scale farms, and limited industrial assets. Besides the community, major resources affected by flood in the Lower Awash Sub-basin are: the three woredas in the basin (Dubti, Asayta, and Afambo) large-scale state-owned and small society-owned irrigation schemes, economically significant and the main way for Ethio-Djibouti accesses road and Logia bridge

3.1.3. Tentative Scope of Physical and Non-physical Interventions

The following interventions are proposed as part of the initial scope:

I. Implementation of Flood Risk Reduction Physical Interventions:

Erect structures to manage and control floodwaters effectively, reducing the impact of flooding.

1) Dredging

Remove accumulated sediments to maintain the river's flow capacity and prevent blockages, ensuring smooth water flow.

2) Channel Widening

Adjust river channels to improve water flow and reduce the risk of flooding. This includes widening and deepening sections of the river.

3) Riverbank Stabilization

Implement measures to stabilize riverbanks using a variety of techniques such as vegetation planting or gabions.

- Gabion works with a rock to floodplain and River bed:

Deploy gabion structures for bank stabilization to prevent erosion, maintain channel integrity, and provide additional support and stabilization to riverbanks.

Vegetation Planting:

Plant appropriate vegetation on slopes, where applicable, to control erosion and enhance environmental sustainability, contributing to the overall health of the ecosystem.

4) Crossing Structure Possible Ford or Culverts

When it comes to river crossing structures, both fords and culverts are viable options as per the river dimension and the flow of water to be implementing

Description of project interventions

This table summarizes the different components involved in the flood protection projects for each site, including the specific activities and their respective measurements.

Item No	Activities Description	Unit	Middle Awash	Lower Awash	Remark
1	Channel Widening	km	14.9	25.8	Both River Bank sides
2	Dredging	km	30.5	16.5	
3	River Bank Stabilization				
3.1	Gabions with a rock to river bed (T100)	Km	1.8	1.7	
	Gabions with rock to floodplain (T100)		1.1		
3.2	Rock to the riverbed	km	14.3		
	Rock to floodplain		13.6		
3.3	Plant vegetation on slopes and river bank	Km	29.2	3.9	
4	Crossing Structure Possible Ford or Culverts	No	2	1	
Total		km	60.5	48.9	

Table 1.Summary of the work items in each specific project

4. Scope of Services, Tasks, and Expected Deliverables

4.1. Scope of Services

The consultant will be responsible for:

- Reviewing the contractor's work schedule required, and contractor deliverables.
- Supervising construction and ensuring adherence to technical specifications.
- Monitoring compliance with the Environmental and Social Management Plan (ESMP).

4.2. Duration of the Project

The project completion is anticipated within a total duration of 6 months. The project encompasses two distinct components, each managed by separate contractors:

- Middle Awash Basin flood protection project
- Lower Awash Basin flood protection project

The construction phase for each site will take 6 months, ensuring construction supervision activities are completed within the 6-month timeframe.

4.3 Scope of Civil Work

It covers two sites as explained in the earlier scope and is to be implemented in 6 months for each site

Clearing of sites

Top soil within 10cm depth and 5m width near river banks that may include shrubs, grass, and vegetation

River dredging and widening

It is the main activity that silt deposited or accumulates inside the river channel and it will be dredged and widening of the channels for a uniform flow of water and reduction of overtopping from the river channels

Disposal of dredged material

the dredged material will be transported and disposed of up to 1km away from the river channels avoiding any potential negative effects that may have back effects.

Gabion works with a rock to floodplain and River bed(T100)

Suitable on floodplain for wide enough with high protection is required

Rock to river bed, and floodplain works

Riprap (mixed) is a layer of large stones that protects soil from erosion in areas of high or concentrated flows and creates floodplains that can absorb excess water during floods, reducing the impact on surrounding areas.

Crossing Structure Possible Ford or Culverts

Fords are shallow places in a river or stream where vehicles can drive across. They can be natural or improved with materials like concrete or rock Culverts are structures that allow water to flow under similar obstructions. They can be made from concrete, steel, or plastic

Vegetation covers

Slope protection with vetiver grass to reduce erosion

5. consultancy Services

The general scope of the consultancy services is to assist flood protection listed under the scope of works simultaneously with monitoring, on-site supervision, management of the works contract and flood protection works supervision including time control, cost control, and quality control aspects of the works and environmental and social management compliance.

For this purpose, the consultancy firm will provide team of experts at site and office levels during the period for supervision of the works contract.

5.1. Project Supervision

5.1.1. Site handover

- Issuance of site handover notice to the Contractor(s) as per the general conditions of the contract in coordination with the beneficiaries.
- ✤ Mark out the benchmarks within the site

5.1.2. Review of Contractor's Implementation Schedule

- The Contractor's work methodology & Schedule shall be reviewed thoroughly by the Consultant.
- Interrelations between the various activities shall be carefully reviewed particularly concerning time allocation, commencement, and completion dates.
- At the end of this procedure, an agreed implementation schedule should be provided by the contractor(s) to the satisfaction of all parties.
- Review and approve the Physical, Machinery, Equipment, Manpower, and financial flow Schedule of the contractor as per the contract agreement document.

5.1.3. Supervision and Contract Administration of Works

The Consultant shall review and recommend for approval the contractor's detailed work program, method statement for flood protection works and commissioning, availability and ensuring the adequacy of contractors' inputs in terms of machineries or output, equipment, machinery, and human resources in accordance with the provisions contained in the work specifications / general conditions of contract / particular conditions of contract.

- The Consultant shall provide the necessary supervisory staff to be employed during the period of implementation in executive and supervisory capacities in respect of the contracts.
- The Consultant shall check and evaluate the contractor's mobilization on site with respect to machinery and personnel related to the project flood protection as per the provisions of the contract and their suitability and acceptability on site within the framework of the work and advise the PMU for granting permission to start the work.
- The Consultant is responsible for checking and setting out the alignment of the river channel, and other related works as per engineering practices based on the dimensions and data provided in the approved on the ground.
- The Consultant shall supervise the works that are executed by the contractor on a day-today basis and ensure that all the works are executed as per the technical specifications and in respect to the work schedule, as per the specified time line and cost.
- The Consultant shall Monitor and enforce, as detailed in the Contractor's Safety Manual, the measures established to ensure the safety of the workers, other project personnel, the general public, the works in particular, and the environment in general.
- The Consultant is responsible for efficient contract management, time control, quality control, and cost control by monitoring all clauses of the Contract scrupulously.
- The consultant is responsible for writing a daily site diary which shall record all events pertaining to the administration of the Contract, requests from and orders given to the Contractor, and any other information that may at a later date be of assistance in resolving queries concerning the execution of the works;
- The Consultant shall check the Bi-weekly, Monthly Progress and Final project completion Reports prepared by the contractor and prepare in agreed formats for the project (each subproject) in a suitable project monitoring software, including physical and financial progress, variations, time extensions, problems and risk analysis issues, etc...
- The Consultant is responsible for checking all quantity measurements and calculations required for payment purposes and ensuring that all measurements and calculations are carried out in an acceptable manner and at the frequencies specified in the contract documents;

- The Consultant is responsible for evaluating and processing contractors' requests for interim payment;
- The Consultant is responsible for identifying problems including delays and recommend to the PMU about action(s) to expedite progress if the works fall behind schedule;
- The consultant is responsible in advising to interpret and apply various provisions of the contract documents with respect to the Contractor's conformance and compliance with his contractual obligations in general and with respect to compensation events leading to time extension, variations, additional compensation or payment of extra cost and disputes raised by the Contractor in particular and recommending appropriate decisions;
- The consultant is responsible in preparing detailed activities and recommendations to the PMU for contract change orders and addenda, as necessary, to ensure the best possible technical results are achieved within the budget available as per the client's order
- The consultant is responsible in advising the Contractor to carry out all such works or to do such things as may be necessary in his opinion to avoid or to reduce the risk of any emergency affecting the safety of life or the works or adjoining property;
- Advice the client in checking the As-Built and as per the given standards that are submitted by the contractor on completion of work;
- The Consultant is responsible for the preparation of the completion report of the whole work; The Consultant is responsible for conducting provisional taking over of the project together with the client and contractor;

No.	Job Title	#	Qualification &	fication & Specific Experiences		Time
			Education		Experience	(Months)
1	Resident Engineer	2	MSc in Civil or Hydraulic Engineering or related fields	Supervision of integrated flood management projects, Project manager or resident Engineer	15+ years	12
2	Site Engineer	3	BSc in Civil or Hydraulic Engineering or related fields	Construction of hydraulic structures and flood mitigation works	10+ years	18

Table 2. Professional Requirement

3	Quantity surveyor	2	BSc in Civil Engineering or Quantity Surveying or related fields	Quality control and quantity measurement for infrastructure projects	10+ years	12
4	Senior Environmentalist and social specialist	2	MSc or BSc in Environmental Science or a related discipline	Environmental safeguard compliance and monitoring donor donor-financed Projects	10+ years	12
5	Surveyor	3	BSc in Surveying or Geomatics or related fields	Conducting topographic and land surveys for flood management projects	10+ years	18

6. Specific tasks of staff

6.1. Resident Engineer

- Review and approve the flood protection methodology and schedule submitted by the contractor;
 - Implement. flood protection management system for the works;
 - Check contractors' setting out;
 - Taking measurements for the purpose of certifying payments and claims; •
 - Quantity control of the machineries or output and works;
- Coordination with the relevant authorities and/or stakeholders on-site during. flood protection;
 - Keep daily records of all aspects of the supervision works;
 - Approve the machineries or output and equipment brought by the contractor
 - Monitor the environmental impact during. flood protection;
 - Check monthly measurement of work and certify payment;
 - Ensure that complaints from the public and other stakeholders are attended
 - expeditiously and take the necessary action to resolve any conflicts arising;
 - Ensure that any dispute arising with day-to-day work is resolved at site level;
 - Advise PMU on claims, disputes, and defect corrections certification;
 - Report progress, trends that are likely outcome of contracts, and other information required to the Client's Project coordinator/delegated Engineer.
- ✤ Assist the site Engineer and other staff in the day-to-day management of flood protection works and related activities.
- * Assist all staff in planning, control, and management of the teams' work.
- Assist in monitoring progress, evaluating results, and identifying and resolution of constraints.
- ***** Prepare reports including inception, monthly, end-of-season and final reports.
 - Assist in developing a flood protection management system for the works;
 - Assist in developing a Quality assurance & control plan.

6.2. Quantity Surveyor/Engineer

Responsibilities of the Quantity Engineer will include but not limited to the following:

Report to the Resident Engineers;

- Carry out joint measurement of quantities for verification of contractor's interim and final statements;
- Based on these measurements, make verification on eligible Payments to the contractor;
- maintain a full record of payment data related to take-off sheets, flood protection activities, and as-built drawings and survey data
- undertake all the drafting activities; prepare topographic maps and drawings where necessary;
- ✤ delivers appropriate payment-related data; and
- ✤ Assist in contract administration.
- Review and approval of the contractor's detailed Quality assurance & control plan for different components of work in accordance with contract provision;
- Supervising and monitoring the Contractor's activity to ensure satisfactory standards, quality assurance, control of workmanship and progress
- Review the suitability of sources of machineries or output and their quality based on inspection, test results, and/or manufacturer's certificates;
- Check Contractor's machineries/equipment as per standard frequency specified in relevant specifications and impart training to Contractor's personnel to conduct different tests;
- The QS /Engineer shall check all the records required to be maintained by the contractor as per the quality assurance plan periodically;
- Assist the Project Manager's representative in checking and approving schedules given by the contractor as per the agreed and approved;

6.3. Senior Surveyor

Responsibilities of the Senior Surveyor will include but not limited to the following:

reports to the resident engineers;

- prepare and oversee all the survey work during the. flood protection period;
- Carry out joint measurement of quantities for verification of contractor's interim and final statements;
- Coordinate and manage the survey team during. flood protection period.
- Maintain a full record of survey data's

6.4. Site Engineer

Responsibilities of the Site Inspector will include but not be limited to the following:

- Follow up on on-site activities and keep track of the work progress and quality of performance in compliance with the technical specifications;
- Act as focal points for the Resident Engineers and other key staff for day-to-day monitoring of the site activities;
- Assistant Resident Engineers in preparing relevant records, work measurements, collecting and keeping the records for use by the Contract Specialist in resolving claims and disputes, preparation of progress reports, financial statements, etc.

6.5. Environmental and Social Specialist

6.5.1. Environmental Specialist

The environmental specialist will be available at the construction site during the construction stage. The specialist will

- Manage the implementation and management of all environmental safeguard activities under the ET-FMP in Middle and Lower Awash project sites,
- Create a detailed action plan that includes environmental monitoring checklists to ensure that the environmental management system in accordance with the environmental and social risk management instruments is established, implemented, and maintained.
- She/he will ensure environmental risks and impacts are managed during the construction works,
- Provide training and briefings to ensure that contractors and workers are aware of environmental and social risk regulations, standards, and requirements of the government and the World Bank,

- Ensure baseline monitoring and reporting of contractor's compliance with contractual environmental and social risk and impact mitigation measures during the supervision stage.
- Assist the contractor to develop and implement detail sub-project specific contractor environment management plans (SSEMPs) for civil works and activities under ET-FMP project, OHS plan and community health and safety measures,
- Lead in the oversight of implementation of environmental risk management and compliance with the Government and World Bank (ET-FMP) environmental and social framework in consultation with the PMU and ET-FMP management unit.
- Ensure that the preparation/design and implementation of all project activities are fully aligned with the country's regulations and project's Environment and Social Management Framework (ESMF),
- Assess and approve use of temporary construction areas identified during construction such as camps, laydown areas, access roads, etc.
- Monitor on environmental safeguards during construction including ambient environmental monitoring (air quality, soil quality, water quality and noise levels) in accordance with national laws, World Bank guidelines and international best practices and on ESHS performance of the contractor as set in the site-specific ESMP.
- Evaluate the contractor's submitted works activities and schedules relative to the requirements of the approved SSEMPs.
- Provide sufficient detail regarding the incident or accident that occurred during the construction of ET-FMP (if any), indicating immediate measures taken or that are planned to be taken to address it,
- Estimate the volume of dredged material/waste to inform evaluation of dredged waste disposal before initiation of dredging activities, and assess and select proper waste disposal option for removing the dredged waste,
- Prepare reports on ET-FMP environmental compliance performance, including progress reports and completion reports.in separate from the main task
- The supervision consultant conducts necessary laboratory testing before the material is disposed of properly.

6.5.2. Role of Social Specialist

Carry out the following activities consistent with the Works contract to be supervised, including but not limited to the following

- Conduct community and stakeholder consultations regarding the social impacts and grievances that might be faced during the implementation of fast-track works
- Conducting social impact assessment to identify project-affected people and prepare mitigation for the social impacts and consult contractors and stakeholders
- support the Works employer to organize an SEA/SH conference, ensure appropriate representation at the conference, and follow up on any agreed actions by the attendees;
- monitor contractor's compliance with its SEA/SH Prevention and Response Obligations in the Works contract, and take appropriate contractual actions if non-compliance is identified, including upon identification of potential non-compliance by a dispute board;
- ensure that any allegation of SEA and/or SH that are received by the Consultant are documented, maintaining appropriate confidentiality, and promptly submitted to the Employer and the Contractor;
- before its engagement for the Works, verify that any proposed subcontractor not named in the contract, is qualified in accordance with the provisions of the SEA/ SH performance declaration for sub-contractors;
- provide appropriate support and relevant documents that a dispute board may need in reviewing SEA/SH contractual compliance
- Supervising the contractor/s regarding the provision of safeguard training and community awareness-raising
- Consult on the adherence to and implementation of environmental and social management included in the contractual agreement of the supervising consultant and contractors
- Monitoring the progress and preparing reports on social issues, consultations, impacts, implementation of mitigations, grievances arise and management of complaints and stakeholders participated in handling complaints in the process of implementation of fasttrack works

7. Progress Reporting and Reviews

7.1. Progress reporting:

The Consultant shall prepare as of the World Bank standards and submit bi-weekly, monthly reports of the works, for each site independently including:

- Information on measurements of works executed,
- ✤ Machineries supplied to site; used and/or stored
- Flood protection machineries or output and equipment;
- ✤ Variation orders, if any;
- Payments made to the Contractor(s),
- ✤ Acceptance tests of machines,
- Problems encountered and recommendations made by the consultant,
- Photographs showing the progress of the works.
- The Consultant shall also prepare and submit the seasonal report at the end of each working season describing the progress of the works package-wise and indicating the problem areas and actions required to overcome accordingly.
- The Consultant shall also prepare and submit a Package Completion Report on completion of all work.
- The Consultant shall prepare and submit inception reports describing the working methodology and work program for the services within one month of the mobilization period.
- The Consultant shall prepare and submit the final report of the services on completion of the Services and shall advise on the issue of the provisional and final hand-over certificates.
- The Consultant shall arrange site meetings with the Contractor(s) at regular intervals to discuss progress and quality of works and resolve any pertaining problem.
- The Consultant shall issue a Variation order and claims for an extension of time or any change in works, if any, based on the contract after obtaining approval from the Client. The Consultant shall also monitor the contract costs relative to the Client's budgetary provisions.

7.2. Schedule of Reporting and Deliverables

All reports should be submitted as required below and in an electronic and hard copy format

- At the completion of the project the Consultant shall provide to the Client, free of charge, a full copy of the drawings recording any changes in the original working drawings.
- The Consultant is responsible for providing information and reports on the ongoing activities and progress of work.

The consultant is required to submit, for each sub-project, the following reports to the PMU.

- ✓ Inception report in 3 (three) copies plus a soft copy, one week after the issue of the letter for commencement of work. This report should include the related work arrangements, the staff deployment schedule, and details of the program of work.
- Assessment Report on the Baseline condition of the project site in parallel to construction works
- ✓ Environmental and Social Compliance Performance progress and completion Report
- ✓ Minutes of Community and Stakeholder consultation meetings
- ✓ Quality Assurance Plan in 3 (three) copies plus a soft copy one week after the commencement of work.
- ✓ The report should include the type and nature of quality control tests to be conducted, acceptance criteria, frequency of tests, standard observation sheets, and documentation based on approval. flood protection tender document.
- ✓ Progress reports in 3 (three) copies plus a soft copy at monthly intervals and at the end of each. flood protection season, summarizing the financial situation of all work and contracts, progress achieved, difficulties encountered and issues to be resolved,
- Project Completion Reports on completion of each package in 3 (three) copies plus a soft copy.

7.3. Review & Coordination Meetings

Weekly review meeting with the consultant, contractor and client to review and evaluate the progress of the work as per the schedule submitted by the contractor on a weekly basis which is cascaded from the master schedule.

- To give a solution for any problem encountered during the execution of the. flood protection activities, the minutes of the meeting signed and sealed will be attached with the monthly report and distributed to all parties.
- Monthly review and coordination meetings shall be held with the Consultant's team leader; expert team members and representatives of contractors shall be held with the Project Manager/ Superintending Engineer to review the flood protection works.
- Quarterly review and coordination meeting with the Consultant's team leader expert team members and contractors shall be held with the Client's PMU at the site or head office in order to review implementation and progress of the assignment.
- All the suggestions and comments that are made during such meetings shall be taken into consideration and implemented by the respective parties.

7.4. Environmental Safeguards Compliance

carry out the following activities consistent with the Works contract to be supervised, including but not limited to the following:

- (a) support the Works employer to organize an SEA/SH conference, ensure appropriate representation in the conference and follow up on any agreed actions by the attendees;
- (b) monitor contractor's compliance with its SEA/SH Prevention and Response Obligations in the Works contract, and take appropriate contractual actions if noncompliance is identified, including upon identification of potential non-compliance by a dispute board;
- (c) ensure that any allegation of SEA and/or SH that are received by the Consultant are documented, maintaining appropriate confidentiality, and promptly submitted to the Employer and the Contractor;
- (d) prior to its engagement for the Works, verify that any proposed subcontractor not named in the contract, is qualified in accordance with the provisions of the SEA/ SH performance declaration for sub-contractors;
- (e) provide appropriate support and relevant documents that a dispute board may need in reviewing SEA/SH contractual compliance

8. Consultant's Office and Equipment:

- The authorized officials of the Client may visit the Consultant's offices any time during office hours for inspection and interaction with the Consultant's Personnel.
- It is not expected from the Consultant to carry out the operations from the Head/Home Office.
- The Consultant shall mobilize and demobilize its Professional Personnel and Support Personnel with the concurrence of the Client's PM and shall maintain all Personnel's timesheets/ attendance sheets.
- These time sheets/ attendance sheets shall be made available to the Client as and when asked for and a copy of such record shall be submitted to the Client bi-weekly

9. Schedule

The flood risk reduction work is intended to be completed for the **Middle and Lower Awash** within Six (6) Months. The consultant is expected to distribute the resources used for the service according to logical patterns and manners.

10. Client's Input and Counter Part Personnel

The following are the inputs and facilities to be provided by the Client;

- Access to all available reports, studies, data, maps, and institutions relating to the works, including contractors' contracts for works
- ✤ Access to all sites for surveys and investigations.
- ✤ Facilitating all contacts necessary for the proper implementation of the project.

The Client or Project offices may assign its staff to the Consultant





Map 1. Location map of the Haruka project site



Map 2. Location map of the Dulessa flood Intervention project site



Map 3. Location map of Gelehalo project site







Map 5. Longitudinal section





Awash River Cross-Section at Gewane and Gelehalo Woredas Sample Design