Emergency Employment Investment Project

(EEIP)

Environmental Management Plan

for

Protection of River Nile Sides

Sub-Projects

January 2014

List of Acronyms

DoI	Directorate of Irrigation
EEAA	Egyptian Environmental Affairs Agency
EIA	Environmental Impact Assessment
EEIP	Emergency Employment Investment Project
EMP	Environmental Management Plan
ESSAF	Environmental and Social Screening and Assessment Framework
EU	European Union
GoE	Government of Egypt
IAs	Intermediate Agencies
MWRI	Ministry of Water Resources and Irrigation
PIU	Project Implementaion Unit
PPE	Personal Protection Equipment
SA	Sponsoring Agencies
SFD	Social Fund for Development
WB	The World Bank

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1 Introduction

The Emergency Employment Investment Project (EEIP) was signed between the EU and the GoE on July 2013 and the administrative agreement was signed between the EU and the World Bank on December 2013, the project is funded by the EU and being implemented by the Social Fund for Development (SFD) with support from the World Bank (WB). The objectives of the project are to create short-term employment opportunities for unemployed unskilled and semi-skilled workers and to provide access to basic infrastructure services to the target population in poor areas. Many sub-projects will be implemented under the EEIP umbrella in different sectors including: rehabilitation of houses and schools, canal cleaning and weeds reduction, River Nile side protection, surfacing and completing rural roads, cleanliness campaigns and waste collection from villages, early childhood education services, outreach of maternal and child health and youth employment in rural and urban settings. The implementing agency of the project is SFD who will sign agreements with Sponsoring Agencies (Ministries, Governorates and NGOs in corresponding sectors) for the execution of the project in different Governorates. The Sponsoring Agencies (SAs) will sign a contract with Intermediate Agencies (IAs) to carry out all the technical support and supervision tasks. The IAs in turn sign contracts with the contractors to execute the project activities.

During the project appraisal an Environmental and Social Screening and Assessment Framework (ESSAF) has been prepared for the EEIP. The ESSAF has concluded that all project's interventions fall into Category B or Category C according to the World Bank Environmental Assessment Safeguard Policy (OP 4.01). None of the other nine Environmental and Social Safeguard policies will be triggered according to the ESSAF. The ESSAF has been consulted with different stakeholders during March 2012.

The Loan Agreement between the SFD and the WB has stipulated that in the event that the ESSAF requires the preparation of an EIA/EMP, and/or Environmental Safeguard Guidelines specific for each type of sub-projects such documents should be prepared according to the type of sub-projects and expected environmental impacts.

The Protection of Nile Sides sub-projects, subject of this Environmental Management Plan (EMP), are considered to be associated with some environmental issues that require to be considered during the implementation of these sub-projects. This EMP was prepared in response to the Loan Agreement requirements, so that any negative impacts could be adequately managed by the project stakeholders. The EMP shall fulfill the following objectives

- Identify the environmental issues and assess their significance
- Identify mitigation measures that should be taken to minimize negative environmental impacts
- Identify monitoring activities that should be carried out to ensure that negative environmental impacts are controlled during the project implementation

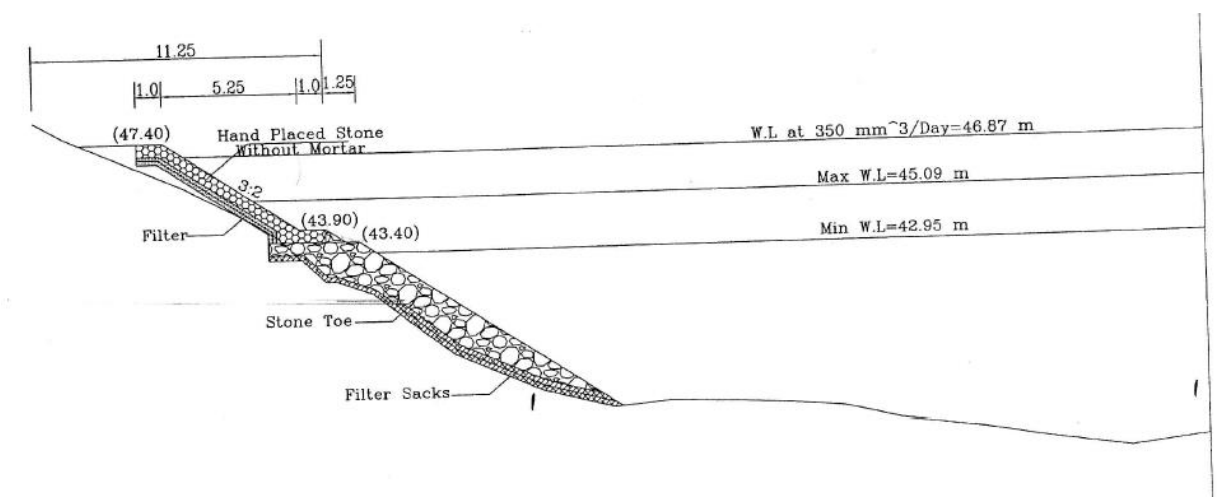
- Identify roles of different stakeholders for implementing mitigation measures and monitoring activities.

2 Description of the Sub-Projects

Protection of River Nile sides sub-projects are implemented routinely by the Ministry of Water Resources and Irrigation (MWRI) for protecting the banks from erosion. These sub-projects will achieve, besides protection from erosion, protection of low agriculture land close to the Nile banks from un-favored seepage and protection of nearby structures from sever deferential settlement. The most affected areas by erosion are the islands, steep bends and other locations where the vigorous vortexes and currents cause rapid erosion of the sides. MWRI prepares an annual plan for sides protection, the plan is demand driven and priority sides are defined according to the risk in the area and also according to complaints from the local community where agriculture lands and structures need to be protected.

The protection of the Nile sides is achieved by placing riprap cover over the sloping berms according to an engineering design suitable for the type of soil and the dynamics of the water current. The riprap is mainly from sand stone or limestone which is being produced at different quarries in the country. The riprap that is placed for protecting the banks is formed from a number of layers including an underwater filter at the bottom of the berm below minimum water laver, a stone toe over the underwater filter also below minimum water level, a filter layer on the berm over the minimum water level and the hand placed stone layer over the filter layer. The components of a standard riprap protection are illustrated in Figure 2-1 below.

Figure 2-1 Example for a cross section illustrating components of a protection riprap



The Protection of Nile Sides sub-projects start during November each year which is characterized by the lowest water level of the Nile controlled by the High Dam and the downstream barrages. This timing is selected so as to be able to place the riprap over the lowest water level as indicated in the

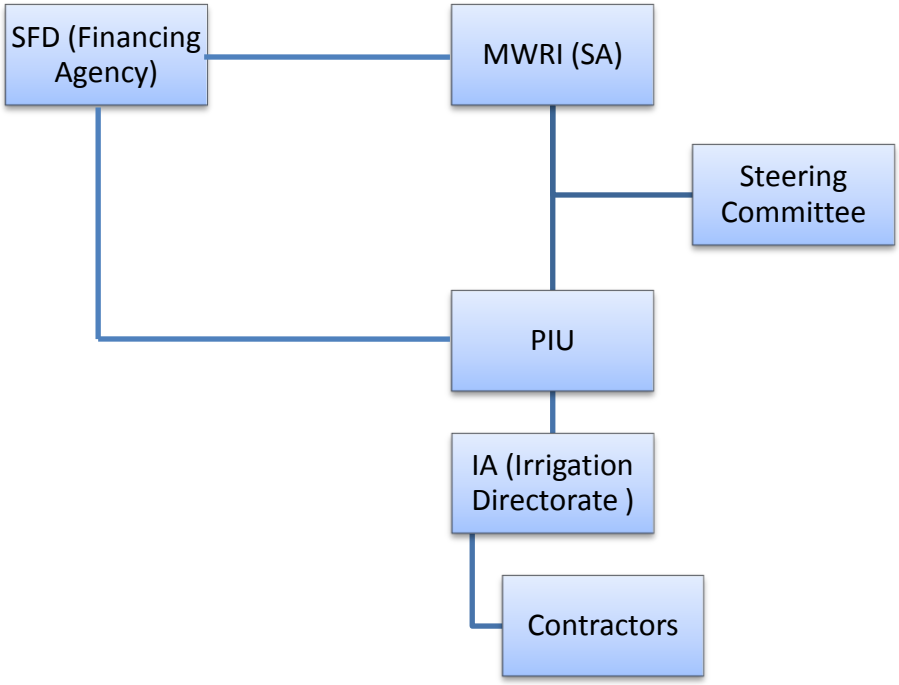
above figure. Before placement of the riprap layers some engineering tests are performed, including drilling representative boreholes and carrying out soil analysis at different levels, and performing quality control tests on the stones at the river bank next to the riprap location to make sure that they are according to the engineering standards. The process usually includes the following activities:

- Site clearance and preparation through removing any wastes accumulated in the area and trimming the berm through excavation and filling in order to reach the geometric design. It is worth noting that filling is carried out by the same excavated soil except in case the original soil is silt or clay, in which the filling is carried out by sandy soil imported from a quarry. The filled soil is compacted using mechanical vibrators and this process is combined by water spraying using a mobile pump.
- The underwater filter is being prepared at the surface by putting the graded sand filter in a geo-textile sacks and placing these sacks on the bed and berms, this is done manually for shallow areas (less than 2 meters) and is done by divers for deeper areas. Usually the underwater filter is 20 cm thick and is being placed through one or two layers.
- The filter layer (above water) comprises a 15-cm gravel layer packed in geo-textile sacks placed below a 15-cm graded sand layer also packed in geo-textile sacks. This filter layer is placed manually above the minimum water level
- The underwater stone toe is being placed over the underwater filter by manually throwing the stones from a cargo barge, which is used to transport the stones to the site, at the adequate location. Throwing the stones is usually supported from landside by survey works to guide the barge maneuvers so that the stones fall at the allocated place.
- The hand placed stone layer (above minimum water level) is manually placed by workers, it is formed from medium size stones (smaller than stone toe) and it is usually being fixed at place by cement. Because the stones are not from regular shape spaces are formed between them, therefore smaller size stones are used to fill these spaces.
- After placing the above layers the berm section is checked by different testing methods (drilling piles and observations by divers) to make sure the depth and slope of the design layers are maintained.

Protection of Nile sides sub-projects will be determined later.

The SA for these sub-projects is MWRI and the IAs are the Directorates of Irrigation (DoI) in the Governorates. The implementation of the projects will be carried out by the contractors at different governorates according to the chart illustrated in Figure 2-2 below.

Figure 2-2 Organizational chart for the sub-project implementation



3 Expected Issues, Correspondent Mitigation Measures and Monitoring Activities

3.1 Environmental Benefits of the Sub-projects

The protection of River Nile sides from erosion will achieve many environmental benefits including:

- Protection of agriculture lands which are located nearby the Nile and is relatively low in the topographic level. These lands are often affected by water seepage through underground percolation; therefore unfavorable water sometimes accumulates in these lands requiring effective draining methods otherwise the productivity if such lands could be significantly downgraded. The riprap on the Nile banks significantly reduces the seepage to low lands for an effective distance from the Nile, this distance depends on the local geological conditions. Protecting these lands is one of the factors that makes MWRI intervene for executing such protection works
- Protection of structures located nearby the Nile from differential settlement which results from the bank erosion. This differential settlement could affect stability of structures at certain degrees according to many factors. The protection of the Nile banks would effectively protect the soil erosion and in turn will protect many structures, especially old structures, from stability problems
- The protection of the Nile banks will generally maintain the morphology of the river which is important for preserving the entire ecosystem, protecting the Nile islands, which are regarded as natural preserved areas, and preventing inundation of certain areas.
- In the absence of integrated solid waste management systems in many areas of the country, especially rural areas, many areas of the Nile sides have accumulated waste from nearby settlements. The implementation of the sub-projects may, accordingly, be associated with removal of accumulated waste as part of site clearance. According to the experience of MWRI, after placing the riprap on the river banks no more waste accumulates in these areas as the aesthetic value of the location is being preserved

This EMP will document the environmental benefits achieved by the subprojects, which will help in assessing the overall benefits of the EEIP and could be a guide for planning future projects.

The suggested measures for documenting environmental benefits are:

- The DoI at each Governorate should report on the rationale of each sub-project and the rationale behind selecting the location. In case that the sub-project has been selected after receiving complaints from the local community about erosion/inundation of agriculture land or complaints about stability impacts of structures this should be clarified in the report along with the number of received complaints, total area and total number of structures to be protected. And in case the sub-project has been initiated to protect a certain area located at a

risk location it will also be required to indicate the area that would be saved from erosion by implementing the project

- In case the protection works of the sub-project will involve removal of accumulated waste for site clearance, the contractor should arrange for adequate truck to transfer the waste to an authorized disposal site, this will more detailed in this EMP.
- The DoI should make a photographic documentation of the location before and after removing the waste.

Also the following monitoring indicators should be recorded for each sub-project:

- The area of agriculture land where stopping the erosion/inundation has been reported by the beneficiaries, in comparison with the situation before implementing the sub-projects. This would be carried out by the DoI before the end of the EEIP so that enough time could be given for reaching representative monitoring results
- The amount of accumulated waste, if applicable, that have been removed from the site during site clearance. This should be estimated by the contractor through calculating the number of trips of the waste truck to the disposal site and the volume capacity of the cargo box.

3.2 Fulfillment of EEAA Requirements for EIA Forms

The sub-projects should comply with the requirements of the Egyptian Environmental Affairs Agency (EEAA) regarding preparation of Environmental Impact Assessments (EIA). EEAA has issued updated Guidelines for the rules and procedures of undertaking EIAs, in which projects are classified to 3 classes of EIAs according to their expected impacts on the environment, which are Class A, B, and C ascending respectively from lower to higher impacts on the environment[1]. The Guidelines gave some examples of the required class of EIA, these examples included "medium size irrigation and drainage projects" classified as Form B but the "protection of Nile sides" was not explicitly among these examples. The Guidelines indicate that projects that are not among the given examples should be classified according to the consumption of resources, the type of project and the expected change on land use, type of inputs/outputs and extent of corresponding environmental impacts and the geographic extent of the impacts. Because of the limited scale of works expected in the protection of Nile sides sub-projects and temporary nature of the impact the classification of such projects could be Class A or Class B, and there is also a possibility that no EIA Form would be required for some of the projects. It is worth noting that the Guidelines indicate that projects

[1] Class A is equivalent to Category C in the WB screening of projects according to OP.4.01, Class B is equivalent to Category B and Class C is equivalent to Category A

located in sensitive areas including natural protectorates[2] should be upgraded one level in the EIA classification.

The MWRI will be required to check the proper classification of the subprojects with EEAA during an early stage of the project and request receiving an official letter from EEAA advising on the proper class of these sub-projects[3]. In case that a certain Form would be required, the DoIs at the Governorates should prepare and submit the EIA Form timely for each sub-project and follow-up EEAA feedback. This is reflected in the following measures:

Measures for ensuring the fulfillment of EEAA requirements:

- The MWRI should send an official letter to EEAA requesting advise whether an EIA Form is required for these types of sub-projects, indicating the location of these sub-projects and that some of them are in islands, this should be carried out as soon as possible.
- The DoIs should prepare the appropriate EIA Form, if required; submit it to EEAA and follow-up their feedback. Any conditional approval of EEAA on the projects should be part of the contractor's commitments during the implementation.

The implementation of these measures does not require monitoring of measurable indicators; it would be followed up through the reporting procedure.

3.3 Risks of Inadequate Waste Management Procedures

The site clearance works may involve removal of some waste accumulations as mentioned earlier. The removal of waste from the Nile sides will have many benefits as the accumulation of waste at these locations could have negative effects on the Nile water quality, due to possible waste leaching risks, in addition to the normal negative impacts of waste accumulation. In case a sub-project involves removal of waste accumulations, it will be important to adequately handle this waste, transport it in a covered waste truck and dispose it in an authorized disposal site.

The site preparation will include trimming of the sloping berm in order to fix the cross section at the desired slope, therefore there could be limited excavation and filling works. The standards of MWRI mention that the excavated soil should be used in filling except in the case of clay and silt soil where the filling should be from graded sand imported from quarries. Accordingly, in the cases where the original soil is not silt or clay the soil balance between excavation and filling will leave only minimum waste quantity, but in locations of silt or clay soil the excavation waste will be a larger quantity. The

[2] Some of the project areas are the sides of some islands, as shall be more detailed later, which are regarded as natural protectorates

[3] The Guidelines require project proponents to consult with EEAA for classifying projects that are not among the given examples so as to ensure proper classification, the Guidelines indicate that EEAA should respond in writing to such consultation request

resulting soil waste would be inert waste as it is not likely to be contaminated from a previous landuse; therefore the impacts of its disposal would be minimum if it is disposed at an authorized disposal site. Although this clay/silt waste will not be suitable for filling of construction works, it will have high fertility value that could be used in agriculture land either for land flattening or for conditioning sandy soil. Ideally, from the environmental perspective, this waste should be used in agriculture, however, for avoiding long tendering procedures by MWRI which could be associated with improper storage of the waste, it would be required to either offer the soil to local farmers if they could effectively collect it on time, or to dispose it at the authorized disposal site as a minimum requirements.

Another aspect related to waste management is the waste generated by workers and site staff. It would be required to avoid any littering on the Nile during the work, or leaving any waste behind after the work.

The following mitigation measures are recommended to minimize the above risks:

- In locations where the sub-project site contains accumulated wastes that need to be removed for site clearance, the DoI should request identification of the authorized disposal site from the Local Authority through an official letter. The DoI should include disposing such waste at the identified disposal site in the tender documents and contracts with the contractors.
- The contractor should arrange for loading any waste resulting from site clearance to a suitable truck which should dispose the waste in an authorized disposal site by the local authority. The truck should be tightly covered before moving to the disposal site. The DoIs should ask their site engineers, who will provide site supervision on the quality of the works, to also supervise this measure.
- The contractor will be encouraged to arrange for delivering clay and silt excavation waste to farmers for leveling or conditioning their agriculture land. This will not be a compulsory measure as the demand will be according to local conditions, but it will be required from the contractor to report whether this soil has been reused, and if not, the minimum requirement will be the transfer of this soil to the disposal site. The DoIs should ask their site engineers, who will provide site supervision on the quality of the works, to also supervise this measure.
- The contractor will be responsible to avoid any littering from his workers, either on the Nile or on the bank. No waste should be left behind at the end of each working day. DoIs should ask their site engineers, who will provide site supervision on the quality of the works, to also supervise this measure.

Monitoring of the effectiveness of implementing the above measures will be through:

- The contractor should record the amount of waste that is being transferred to the disposal site through keeping records of the number of waste truck trips to the disposal site and the capacity of the truck.

- The contractor should record amount of excavation waste that will be reused by farmers, if applicable. This should also be recorded through keeping record of number of farmers' trucks (or trailers) trips and the capacity of each truck.
- The DoI should prepare a complaint log, where the local community will be given the opportunity for complaining from unauthorized waste disposal or any waste left behind the contractor after the end of the work.

3.4 Impacts on Lands Selected for Quality Control Tests

Prior to placing the riprap layers on the Nile berm, a number of quality control tests are being performed on the riprap stones. According to the standards procedures of MWRI, one of these tests is carried out by placing rows of the stones on a flat area, observe the stones to make sure that they are homogenous, free from strange objects and does not soak water more than 10% from its weight. This test is carried for a sample from the stones brought from the quarry at a selected location at the bank near the riprap area; the Technical Standards for the procedure indicate that the area selected for this test should be approved by Irrigation Engineering Administration so as to avoid obstruction to canals, drains or roads. The Standards mention that this test area could be rented by the contractor who should be responsible for any damaged vegetation or traffic obstruction. During the preparation of this EMP, the MWRI indicated that the brick rows method is rarely implemented in the present and an engineering method is rather followed by testing the stones after placement for a sample area of the berm. In case the brick rows quality control method is needed, the conditions mentioned above (in which the approval of DoI is granted if there will be no obstruction of roads, canals and drains) are believed to be good practices that should be part of the EMP in addition to preventing making this test on a productive agriculture land.

The following mitigation measures are recommended to minimize the above risk:

- In case quality control tests will require using a flat area for placing brick rows, this requirement should be explicitly indicated in the tender document along with the conditions for selecting this area, the contractor will select an area in his tender proposal that will fulfill the conditions
- The DoI will only approve the contractor tender proposal if the land detected by the contractor is not on a productive agriculture land, an area that could obstruct traffic, irrigation or drainage facilities. In such case the area should be mentioned in the contractor's contract
- After performing the test the contractor should totally clear the area and remove any bricks or facilities used during the test.

Monitoring of the effectiveness of implementing the above measures will be through:

- The DoI should prepare a complaint log, where the local community will be given the opportunity for complaining from any obstruction of traffic, canals, drains, any damaged agriculture products from the brick testing procedure.

3.5 Issues related to the Nile Islands

The islands inside the River Nile have high vulnerability to erosion as they divert the water stream creating strong currents and vortex effects, a number of the EEIP sub-projects could be selected in islands as priority areas need protection.

In 1998, The Prime Minister Decree 1969/1998 has stipulated that 144 islands of the River Nile are regarded as natural protectorate, in which developmental activities are regulated by the Law 102/1983. The Law restricts the establishment of structures, roads, agriculture, industrial or commercial activities unless a permit is granted from the competent administrative authority. Although the Decree has been issued for about 15 years, many islands in the Nile already had many developments (houses, infrastructure, agriculture lands, industries … etc.) which could not be changed after issuing the Decree.

The protection works, subject of the EEIP sub-projects, will have positive impacts on the Nile islands as it will protect the island from erosion and will keep their morphological features. Keeping the island's morphology is basically among the main objectives of including the Nile islands among the protected areas; therefore, implementing such sub-projects will support preserving these protected areas.

On the other hand, because the Nile islands have special environmental features there should be special measures taken to adequately manage three main issues.

The first is related to waste management aspects. According to satellite images of the 5 sample islands it seems that there are no solid waste disposal sites inside them[4], therefore there should special arrangements to transport any generated waste during site clearance or during construction process to the other side of the Nile by a barge.

The second issue is related to the areas of land occupied during the riprap placement, a higher degree of diligence is required for keeping the landuse in the island, especially with regards to quality control tests issue discussed in the previous section.

The third issue is related to having the approval EEAA on the project, as being in a natural protected area it would be likely that EEAA will require preparation of an EIA form from a higher

[4] Although the largest of the 5 island, Sharona Island in Sohag Governorate, is clearly inhabited island no waste disposal site has been detected in the satellite image

classification than the normal classification of these projects. This has been discussed earlier in this EMP and the recommended measures for covering this issue have been explained in Section 3.2.

The following mitigation measures are recommended to minimize the above risks:

- The DoI should request identification of the nearest authorized disposal site at the other side of the Nile from the Local Authority through an official letter. The DoI should include disposing such waste at the identified disposal site in the tender documents and contracts with the contractors.
- The contractor should arrange for a suitable barge to transfer any generated waste (site clearance waste or generated waste during construction) from the island to the other side of the Nile where the disposal site is located. Site clearance waste should be loaded directly to the barge, while littering waste should be collected in adequate waste containers and transferred to the barge as well. The waste on the barge will be unloaded by the same methods to an adequate waste truck that should be waiting for the barge at the other side of the Nile. The truck should be tightly covered before moving to the disposal site, and should tip the waste at the target site. The contractor should document the waste transfer/disposal process through photographs that illustrates loading and unloading the barge, the coverage of waste trucks and the tipping of waste at the authorized disposal site. The DoIs should ask their site engineers, who will provide site supervision on the quality of the works, to also supervise this measure.
- No testing of riprap bricks should be allowed on the island. The DoI supervising engineer should either make the test using engineering methods, as mentioned in the previous section, or if a brick rows test would be required, this test should not be carried out on the island.

Monitoring of the effectiveness of implementing the above measures will be through:

- The contractor should record the amount of waste that is being transferred out of the island through keeping records of the number of barge trips to the other bank and the capacity of the barge.
- The DoI should prepare a complaint log, where the local community of the island will be given the opportunity for complaining from unauthorized waste disposal or any waste left behind the contractor after the end of the work.

It is worth noting that these measures are specific extra measures related to the sub-projects implemented in islands, implementing these measures do not eliminate the requirements of implementing other measures mentioned for all projects.

3.6 Dust and noise

The activities of the sub-projects will be associated with some dust generation, these activities include site clearance, excavations, filling, and placing small stones to fill the spaces between large stones. The generated dust emissions are expected to be minor especially with the labor intensive procedure in which input of mechanical equipment (generating large emissions of dust and noise) is minimum. Therefore the impacts on surrounding areas are expected to be minor and temporary, while more effects will be expected on the workers who need to be protected by using adequate Personal Protection Equipment (PPE).

The main noise sources will be during drilling the boreholes, compacting the soil after filling using mechanical vibrators, the work of loaders, excavators, trucks and barges. The workers at the site who will be near such activities need to use ear muffs, especially if they are close to hammers or vibrators. Most of the locations of the sub-projects are not effectively close to residential settlements so the impacts on ambient noise effecting these settlements are expected to be minimum. The standard procedure for such sub-projects is to work during daytime so impacting night ambient noise levels is unlikely.

The following mitigation measures are recommended to minimize the above risks:

- The workers should be provided with PPE including masks for workers who will work in excavation, filling or filling spaces between stones, while workers beside noisy equipment should be provided with ear muffs.
- The work should only be carried out during daytime, and night work is not allowed.

Monitoring of the effectiveness of implementing the above measures will be through:

- The DoI should prepare a complaint log, where the local community will be given the opportunity for complaining from unacceptable dust and noise.

3.7 Issues related to known and Unknown Antiquities

The protection of Nile banks has positive impacts on structures, as mentioned earlier, as it prevents erosion and the subsequent deferential settlement of foundations and it reduces undesirable water seepage to low lands. These benefits directly positively impact antiquity structures located beside the Nile banks. According to MWRI, some of the Nile protection projects are initiated based on request from the Supreme Council of Antiquities to protect a certain structure, however, this procedure has not been applicable to any of the EEIP sub-projects.

The possible negative impact on existing antiquity structures is the soil vibrations associated with drilling boreholes and soil compaction by mechanical vibrators, which affects a limited area around

the subject site. The initial review of the sub-project locations, through satellite images, indicated that no nearby antiquity sites are located, but there might be few exceptions especially for sub-projects where some temples are located near the Nile banks[5]. In such cases the Antiquity Administration in the two Governorates need to be approached to make sure that no vibration impacts will affect the existing structures.

Although it is unlikely to find unknown antiquities by excavation on the Nile banks and bed, the EMP include measures to adequately manage such cases.

The following mitigation measures are recommended to minimize the above risks:

- The DoI should inform the Antiquity Administration at the Governorates about the exact locations of sub-projects respectively, and request advise about any restrictions on the work at such locations
- The restrictions of two Antiquity Administrations, if any, should be part of the contractual commitments of the contractor
- In case of chance finds of any antiquity object during the work in any sub-project, the work should be stopped at the site and the Antiquity Administrations should be contacted to handle the site.

Monitoring of the effectiveness of implementing the above measures will be through:

- In the case that the Antiquity Administration puts any restrictions on work at a certain site, the DoI should prepare a complaint log, where the antiquity administration will be given the opportunity for complaining from unacceptable activities by the contractor.

3.8 Other Issues that do require Interventions from the EMP

There are other issues that are considered beyond the scope of this EMP for different reasons as discussed below.

During the placement of the riprap there will be some impacts on the water quality as the water turbidity will temporary raise at the construction site due to excavation, filling and falling of stones, the extent of the turbid water around the construction site will depend on the soil quality at the bed and the current strength. Generally this impact is regarded as a minor impact because the Nile water already carries fine particles that elevate its turbidity, especially at the locations of high erosion activity, and accordingly the net increase in turbidity is expected to be minor and temporary. Therefore applying engineering methods to contain the turbid water is believed to be unnecessary.

[5] It is worth noting that the exact locations of the sub-project could not be accurately identified through the information available during the preparation of this EMP, however, the preliminary review of the satellite images of the sites indicated that these two sub-projects are the only locations that may be close to existing antiquity structures, while other sub-projects are believed to be far from any antiquity sites..

There are also some impacts that are considered indirect impacts, such as the impacts expected at the quarries where the stones will be taken from (mainly raising dust generation at these sites) the impacts at the disposal site where the waste will be tipped off, the exhaust emissions of transportation trucks and barges and the risks related to the barge sailing from the quarries to the sub-project locations. All these impacts are considered to minor indirect impacts that should not be controlled by special measures in this EMP, mitigating such impacts is expected to be done through the managing entities of these sites.

Tables Table 3-1 and Table 3-2 below summarize the responsibilities for implementation and supervision of the EMP mitigation measures and monitoring activities.

Table 3-1: Responsibilities for implementation and supervision of the mitigation measures

Issue	Proposed Mitigation Measures	Responsibility for Implementation	Responsibility of direct supervision	Means of supervision
Documenting environmental benefits	Documenting the rationale of each sub-project and the complaints received by the local community, if any, to protect their lands or structures	DoI	MWRI and SFD	Review progress reports at an early stage of the project
	Transfer accumulating waste which is removed for site clearance to an authorized disposal site	Contractor	DoI	Site supervision
	Photographic documentation for the sites before and after waste removal	DoI	MWRI and SFD	Review progress reports
Fulfillment of EEAA EIA requirements	Request official advise from EEAA whether the subprojects will require EIA Form, and what type of Form if required	MWRI	SFD	Review correspondence with EEAA
	In case an EIA Form is required, these forms should be timely prepared and followed up with EEAA	DoI	MWRI and SFD	Review correspondence with EEAA
Risk of inadequate waste management procedures	Identify the authorized disposal site by requesting official letter from the Local Authority	DoI	MWRI and SFD	Review correspondence with the Local Authority
	Collect the site clearance waste in an adequate waste truck, cover the waste during transportation and tip the waste at the authorized site	Contractor	DoI	Site supervision

Issue	Proposed Mitigation Measures	Responsibility for Implementation	Responsibility of direct supervision	Means of supervision
	Seek reuse of excavation waste soil in agriculture in nearby lands (this is not a compulsory measure). If this will not be possible the previous measure should be implemented	Contractor	DoI	Site supervision
	Provide adequate management for the waste generated by the site workers, avoid littering and arrange for removing the waste at the end of each working day	Contractor	DoI	Site supervision
Impacts on lands selected for quality control tests	In case a flat land on the Nile bank will be used for testing the stones, the contractor should identify this land in his tender according to the conditions identified by the DoI in the tender document	DoI to include the conditions in the tender document and the contractor to select the land	DoI and MWRI	Review tender document
	Approval of contractor's tenders should be on condition that the selected area is not selected on a productive agriculture land, an area that could obstruct traffic, irrigation or drainage facilities. This should be also included in the tender documents	DoI	DoI and MWRI	Review contractor's tender proposals
	Totally clear the area after finishing the test	Contractor	DoI	Site supervision
Issues related to the Nile islands	Identify the nearest authorized disposal site in the other bank of the island by requesting official letter from the Local Authority	DoI	MWRI and SFD	Review correspondence with the Local Authority

Issue	Proposed Mitigation Measures	Responsibility for Implementation	Responsibility of direct supervision	Means of supervision
	Collect the site clearance waste and other construction waste in an adequate barge, transfer the waste to the other bank, unload the waste to an adequate truck, cover the waste in the truck during transportation and tip the waste at the authorized site	Contractor	DoI	Site supervision
	No testing of stones by testing row methods will be allowed at the island lands, other means or locations of testing should be implemented	DoI for inclusion in tender document (as above) and Contractor for implementation	DoI	Site supervision
Dust and noise	Worker working in dust or noise generating activities should be provided with masks and ear muffs respectively	Contractor	DoI	Site supervision
	work should not be carried out during nighttime	Contractor	DoI	Site supervision
Issues related to known and unknown antiquities	The Antiquity Administration need to be informed about the locations of the sub-projects and if they have any restrictions	DoI	MWRI	Review correspondence with Antiquity Administration at the governorates.
	In case of any conditions from the Antiquity Administration, these conditions need to be included in the contractor contract	DoI for inclusion in the conract and contractor for execution	DoI and MWRI	Review contract with contractors and DoI providing site supervision

Issue	Proposed Mitigation Measures	Responsibility for Implementation	Responsibility of direct supervision	Means of supervision
	In case of chance finds the work on the site should be stopped and the Antiquity Administration should be notified to handle the site	Contractor	DoI	Site supervision

Table 3-2: Responsibilities for implementation of the monitoring activities measures

Issue	Monitoring Indicator	Monitoring Location	Monitoring Methods	Monitoring Frequency	Monitoring Responsibility
Documenting environmental benefits	Areas of protected lands by the sub-project	Sub-project locations	Counting areas of land where the beneficiaries have reported improvements in erosion/inundation	Once during the last quarterly report before the end of the EEIP	DoI
	Volume of waste transferred to disposal site during site clearance	Sub-project locations	Counting number of vehicles trips and multiply by vehicle capacity	To be reported quarterly	Contractor
Risk of inadequate waste management procedures	Volume of waste transferred to disposal site	Sub-project locations	Counting number of vehicles trips and multiply by vehicle capacity	To be reported quarterly	Contractor
	Volume of excavation wasted soil reused in agriculture	Sub-project locations	Counting number of farmers vehicles trips and multiply by vehicle capacity	To be reported quarterly	Contractor
	Number of received complaints	Sub-project locations and DoI local offices	Recording number of received complaints	To be reported on quarterly basis	DoI
Impacts on lands selected for quality control tests	Number of received complaints	Sub-project locations and DoI local offices	Recording number of received complaints	To be reported on quarterly basis	DoI
Issues related to the Nile islands	Volume of waste transferred out of the island	Sub-project locations in islands	Counting number of barge trips and multiply by barge capacity	Once after the removal of the waste	Contractor

Issue	Monitoring Indicator	Monitoring Location	Monitoring Methods	Monitoring Frequency	Monitoring Responsibility
	Number of received complaints	Sub-project locations in islands and DoI local offices	Recording number of received complaints	To be reported on quarterly basis	DoI
Noise and dust	Number of received complaints	Sub-project locations and DoI local offices	Recording number of received complaints	To be reported on quarterly basis	DoI
Issues related to known or unknown antiquities	Number of received complaints from Antiquity Administration	Sub-project locations and DoI local offices	Recording number of received complaints	To be reported on quarterly basis	DoI

4 Administrative Framework for Implementing the EMP

4.1 Implementation Responsibilities

Table 3-1 and Table 3- indicate the responsibilities for implementation and supervision of the EMP measures which mainly falls on the SFD, MWRI, DoI and contractors. The responsibilities of the SA and the IA (MWRI and DoIs respectively) should be reflected in the Framework Agreement that will be signed with the SFD, also the contractors responsibilities should be reflected in their contracts with the DoI; Annex1 and Annex 2 respectively indicate these responsibilities in form that could be attached to these contracts.

The reporting of environmental measures carried out will be along with the regular progress reports prepared for the project according on a quarterly basis. The progress report should have a section on environmental measures where IAs will report on quarterly basis to the SA on any violations recorded or complaints received and this report also must summarize all constraints that have risen during that period of time, methods of overcoming difficulties, the standard itemss of this report is indicated in Annex 3. The progress reports should also include indication to any correspondence with EEAA to be prepared by the SA, such correspondence should be annexed to the report. The SA will collectively report to the SFD on a quarterly basis including the reports received from the IAs as annexes.

A final report must be presented to the SFD by the SA before the end of the project termination date, to include all environmental data pertaining to the project including social and environmental impacts experienced during the project implementation.

4.2 Training needs

The EMP measures are mainly managerial and administrative measures that do not require a special technical expertise. It will be required to provide an orientation session to MWRI and DoIs staff members who will manage the project to explain the requirements of the EMP, the contract conditions, supervisions activities on the contractors that should be undertaken and the reporting requirements.

The DoI staff members will instruct the contractors about their responsibilities by including these instructions in the tender document, by including them in the contract, and by guiding them during the actual implementation. It is expected that contractors will have sufficient capacity to effectively comply with their responsibilities and this will be evident through the tenders that they will submit.

4.3 EMP Budget

Most of the mitigation measures and monitoring activities are managerial and administrative procedures that do not entail additional costs to the original project budget, such procedures could be carried out by the project staff after being briefed and instructed about the reporting and documentation requirements. The only items that may require additional costs are:

- The main item that may require additional costs is the preparation of EIA forms for the sub-projects that will be implemented in the 5 islands. The requirements of EEAA for these forms may include carrying our site reconnaissance, more detailed than other projects, and characterization of the physical and biological environment at these sites, which may require input from external consultants
- Providing covers for the waste vehicles
- Providing adequate PPE for the contractors staff

These items will only cause minor impact on the project budget; however, they should be included among the responsibilities of the contractors on the tendering procedure and on the signed contracts with them.

5 Consultation with Stakeholders

The ESSAF has been consulted with stakeholders during the project appraisal stage; a consultation workshop has been conducted on March 2012. However, it has been recommended that this EMP should also be consulted with local stakeholders so that their feedback could be included in the Final EMP.

A newspaper advertisement has been published in Al Ahram newspaper on 26 May 2013, the advertisement is presented in Annex 4, requesting different stakeholders and interested bodies and individuals to give their comments and feedback on the EMP, the advertisement indicated that the EMPs, Arabic version, were available in the SFD Offices in the Governorates and the documents are also disclosed on the SFD website. The advertisement gave 10 days for receiving comments. Further to Al Ahram advertisement, the request for reviewing the EMPs has also been published by:

- Placing the advertisement on the bulletin boards of the SFD offices, Governorates, City Councils, different Directorates, NGOs, youth centers, agriculture societies and Administrations of Environment.
- Sending targeted letters, requesting comments on the EMPs, to some stakeholders, such as Governorates Secretary Generals, Heads of City Councils, universities, media centers, Directorates, NGOs

The feedback on the EMPs has been collected after 6 June 2013 from SFD Offices. The comments on the EMPs where basically emphasizing on the importance of the sub-projects in reducing unemployment rates and protecting agriculture lands near the Nile banks from water seepage. No suggestions or modifications where received on the EMP measures.

Annex 1: Responsibilities of the SA and IA in Implementing the EMP

The Sponsoring Agency (MWRI) should comply with the following EMP measures:

- Send an official letter to EEAA requesting the adequate classification of Protection of River Nile Sides sub-projects, and whether such sub-projects require the preparation of EIA Form, and what type of form is required. The letters to EEAA should include the locations of the sub-projects emphasizing on the locations that will be in Nile islands. The response of EEAA should be documented in the quarterly progress reports.
- In case EEAA advised that Protection of River Nile Sides sub-projects will require an EIA from a specific Form, this information should be circulated to Intermediate Agencies (Directorates of Irrigation at concerned Governorates).
- Supervise the timely implementation of Intermediate Agencies of their environmental conditions and the periodic reporting on environmental measures with progress reports
- Submit the EMP quarterly progress reports prepared by the IA to the SFD

The Intermediate Agencies (Directorates of Irrigation at concerned Governorates) should comply with the following EMP measures:

- Reporting the rationale of each of the sub-projects including the areas of lands and structures that would be protected. This should be included in the first EMP quarterly report submitted to MWRI
- Preparation of the adequate EIA form for projects, if required, submit them to the designated EEAA administration and follow-up the feedback of EEAA. In case EEAA requested preparation of a specialized EIA Form including site reconnaissance and/or sampling an external consultant should be assigned for preparing this EIA Form. The conditions of EEAA approval should be included in the contractor's contracts. Correspondence with EEAA, EIA forms should be annexed to the next progress report prepared for the project.
- For each sub-project area IAs should request an official letter from the Local Authority identifying the authorized disposal site in the area. The name of disposal site should be included in the contractor's contract, and the correspondence with the Local Authority should be annexed to the next progress report prepared for the project.
- For sub-projects that will be implemented near antiquity sites, the IA should inform Antiquities Administration in the Governorates with the projects locations and request clarifications if there are any restrictions on construction methods. These restrictions, if any, should be included to the contractor's contracts. The correspondence with the Antiquities Administration should be included in the following quarterly reports.

- In case of chance finding any antiquity object during implementing a sub-project site, the IA should make sure that the work is stopped and the Antiquities Administration is informed to handle the site. Such incidents should be reported in the following quarterly progress report.
- In case the sub-project site includes waste accumulations that will be removed during site clearance the IAs should carry out photographic documentation of the site before and after removing these accumulations. The photos to be included to the following quarterly progress report
- In case the stones will require testing by rowing the stones on a flat land, the IAs should make sure that this land will not obstruct traffic, canals, drains, will not be on a productive agriculture land or on an island. This should be included in the tender document and in the contracts with contractors
- The site engineer of the DoI should make sure that the contractor is implementing his EMP obligations in his contract through on site observations. Any violations from the contractors should reported in the following quarterly report along with the actions taken by the IA following these violations
- Engineering Offices in the project areas should prepare complaint's log about the sub-project, this log will include records of any complaints from the local community on unauthorized disposal, obstruction of roads, canals and drains, damaging productive agriculture land, noise and dust. Recorded relevant complaints and measures taken in response to the complaint should be included in the project progress reports.
- The DoI should prepare a quarterly report about the above measures according to the standard format.

Annex 2: Responsibilities of the Contractors

The contactor should comply with the following EMP measures:

- Collected site clearance wastes should be transferred only to ___(to be filled according to location)_____ disposal site which is approved by the local authority.
- No littering is allowed in the site, any waste generated by the contractor workers should be collected in suitable containers, no waste should be left behind at the end of the working day
- *(To be included only in projects in islands)* A suitable barge should be used to transfer the waste to the other side of the Nile, and then the above two measures should be implemented
- In case the DoI requires making testing of stones on a flat area, the contractor should use the land in ----------(please state address and area)---------- approved by the DoI. The area should be totally cleared after the test
- The contractor should provide an appropriate cover to the waste vehicles and should not allow the vehicle to move without cover
- The contractor should provide for each waste worker a dust mask, and an ear muff and other PPE as appropriate.
- *(To be included if applicable)* The attached conditions of EEAA should be followed
- *(To be included if applicable)* The attached conditions of Antiquities Administration should be followed
- Except for cases that are beyond the contractor control, abiding to these conditions is a prerequisite for settling the contractor's payment on the work.

Annex 3: Standard Quarterly EMP Report to be prepared by the DoI

Quarterly Report Information	Quarterly report No: ----- Covering period from: ---------- to ---------- Prepared by: ----------(DoI assigned staff) Approved by: ----------(MWRI assigned staff)
Sub-project information	Governorate: ---------- District: ---------- Address: ---------- Length from High Dam: ---------- Side of Nile: ---------- Length of the protection: ---------- Rationale of the project: ---------- (i.e. protecting ---- m2 of land in -------- location, ------ structures in ------ location) Achievement of the above objectives, please give details and means of verification (to be filled in the last progress report) ---------- ----------
EEAA requirements	What is the classification given the sub-project by EEAA? ---------- Is the EIA form submitted to the EEAA attached to this report or previous reports? If no please state the reason ---------- Is the response of EEAA attached to this report or previous reports? If no please state the reason ---------- If EEAA granted a conditional approval of the EIA form, please describe the actions taken to fulfill these conditions ---------- *Note: Please attach any correspondence with EEAA during this quarter, or any old correspondence that has not been attached to previous reports*
Approval of the disposal site	Is an official letter from the Local Authority indicating the name of the authorized disposal site attached to this report or previous reports? If no please state the reason ---------- *Note: Please attach any correspondence with Local Authority during this quarter, or any old correspondence that has not been attached to previous reports*

Site supervision of the contractor	Please state the name of the DoI staff that has been supervising the site work ---------- Please check the following according to site supervision observations: - Are photos showing the location before and after site clearance works attached to this report or previous reports? If no please state reason ---------- - Was the waste vehicle covered before transportation? If no please state reason and actions taken ---------- - Were the workers wearing PPE (masks for those who work in excavation and filling and ear muffs for those who work near noisy equipment)? If no please state reason and actions taken ---------- - Was the waste disposed at the authorized disposal site? If no please state reason and actions taken ---------- - Please state the amount of site clearance waste disposed during this quarter: No of truck trips --- Capacity of truck ---- m3 amount of waste ---- - Was excavated clay given to farmers for reuse? If yes please mention locations of the farms ---------- - If the answer to the above question is yes, please state the amount of clay taken by farmers: No of truck trips --- Capacity of truck ---- m3 amount of waste ---- - Was the site litter collected at the end of each working day? If no please state reason and actions taken ---------- - Has a flat area been used for testing the stones? If yes please confirm that the area was not a productive agriculture land, and no obstructions were made to roads, canals and drains. If such conditions were not complied with please state the reason ---------- *Note: Please attach any photos or special documents showing above issues during this quarter, or any old photos or documents that has not been attached to previous reports*

Work in islands (to be filled only for sub-projects located in islands)	Has site clearance waste been transferred to the other bank by barge? If no please state reason and actions taken ---------- If the answer to the above question is yes please state the amount of waste transferred by barge during this quarter No of barge trips ---- Capacity of barge ---- m3 amount of waste ---- Has a flat area been used for testing the stones? If yes please was this land inside the island? If yes please state the reason and taken measures ----------
Work near antiquity sites (to be filled for Dandara and Mereis Project and if relevant)	Is the sub-project located near an antiquity site? If yes please give details on the nearby antiquities ---------- Is an official letter from the Antiquity Authority indicating their "no objection" or conditional approval to the sub-project attached to this report or previous reports? If no please state the reason ---------- In case of conditional approvals, has the contractor followed these conditions? If no please state the reason ---------- In case of conditional approvals, have there been any complaints from the Antiquity Administration? If yes please give details ---------- *Note: Please attach any correspondence with Antiquity Authority during this quarter, or any old correspondence that has not been attached to previous reports*

Complaints log	Has there been any complaints received from the local community regarding: - Unauthorized disposal of waste? If yes for each complaint please fill the following Name of the complainer: ---------- Location of complaints: ---------- Date of the complaint: ---------- Actions taken in response: ---------- - Unacceptable dust and generation? If yes for each complaint please fill the following Name of the complainer: ---------- Location of complaints: ---------- Date of the complaint: ---------- Actions taken in response: ---------- - Damaging agriculture land, obstructing roads, canals or drains? If yes for each complaint please fill the following Name of the complainer: ---------- Location of complaints: ---------- Date of the complaint: ---------- Actions taken in response: ----------

Annex 4: Consultation advertisement published on Al Ahram Newspaper on 26 May 2013

SFD الصندوق الاجتماعى للتنمية
Social Fund for Development

دعوة لإبداء الرأى بشأن خطط الإدارة البيئية
لمشروعات البرنامج العاجل للتشغيل كثيف العمالة

يقوم الصندوق الإجتماعى للتنمية حالياً بتنفيذ البرنامج العاجل للتشغيل كثيف العمالة (ELIIP) بالتعاون مع البنك الدولى فى محافظات جمهورية مصر العربية حيث يتم تنفيذ مشروعات ومبادرات تنموية تستخدم أساليب ومنهجية العمالة الكثيفة بغرض توفير أكبر عدد ممكن من فرص التشغيل للشباب والشابات.

وقد قام الصندوق الإجتماعى للتنمية بإعداد خطط عمل بيئية فى القطاعات التالية:

القطاع	المحافظات
حماية جوانب نهر النيل	أسوان - الأقصر - قنا - سوهاج - أسيوط - المنيا - بنى سويف المنوفية - البحيرة - كفر الشيخ
رصف وتمهيد الطرق الريفية	أسوان - الأقصر - قنا - سوهاج - أسيوط - المنيا - بنى سويف الفيوم - الشرقية - البحيرة - المنوفية - الغربية - الدقهلية
حملات النظافة والتشجير بالقرى	سوهاج - أسيوط - الفيوم - بني سويف - الشرقية - قنا - المنوفية المنيا - البحيرة - الدقهلية - الأقصر - أسوان - شمال سيناء مطروح - الجيزة

فى هذا الصدد، يتشرف الصندوق الاجتماعى للتنمية بدعوة الجهات المختلفة وعموم المواطنين بالمحافظات المعنية لإبداء الرأى بشأن مسودات خطط الإدارة البيئية فى خلال (١٠) أيام من تاريخ هذا الإعلان وذلك عن طريق إرسال/تقديم الملاحظات للمكاتب الإقليمية للصندوق الإجتماعى للتنمية بالمحافظات المعنية.

علماً بأن جميع مسودات الخطط المشار إليها يمكن الحصول عليها من خلال المكاتب الإقليمية للصندوق الإجتماعى للتنمية بالمحافظات المعنية أو عن طريق الدخول على البوابة الإلكترونية للصندوق الإجتماعى للتنمية: http://www.sfdegypt.org/web/sfd/statistics