Emergency Employment Investment Project

(EEIP)

Environmental Management Plan

for

Paving and Surfacing Rural Roads

Sub-Projects

January 2014

List of Acronyms

DoR	Directorate of Roads
EEAA	Egyptian Environmental Affairs Agency
EIA	Environmental Impact Assessment
EEIP	Emergency Labor Intensive Investment Project
EMP	Environmental Management Plan
ESSAF	Environmental and Social Screening and Assessment Framework
EU	European Union
GoE	Government of Egypt
IAs	Intermediate Agencies
LPG	Liquified Petroleum Gas
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 bank protection, paving and surfacing 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.

Paving and Surfacing Rural Roads 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

Paving and Surfacing Rural Roads sub-projects are implemented routinely by the Directorates of Roads (DoR) in different Governorates for improving access to different rural settlements. Improving access to villages and rural also yields many developmental benefits including raising real-estate values, improving movement of goods and services, improving access to educational services, health services and other community services. The sub-projects are initiated according demand from the local community, prioritizing the sub-projects is mainly based on serving maximum beneficiaries by connecting isolated settlements.

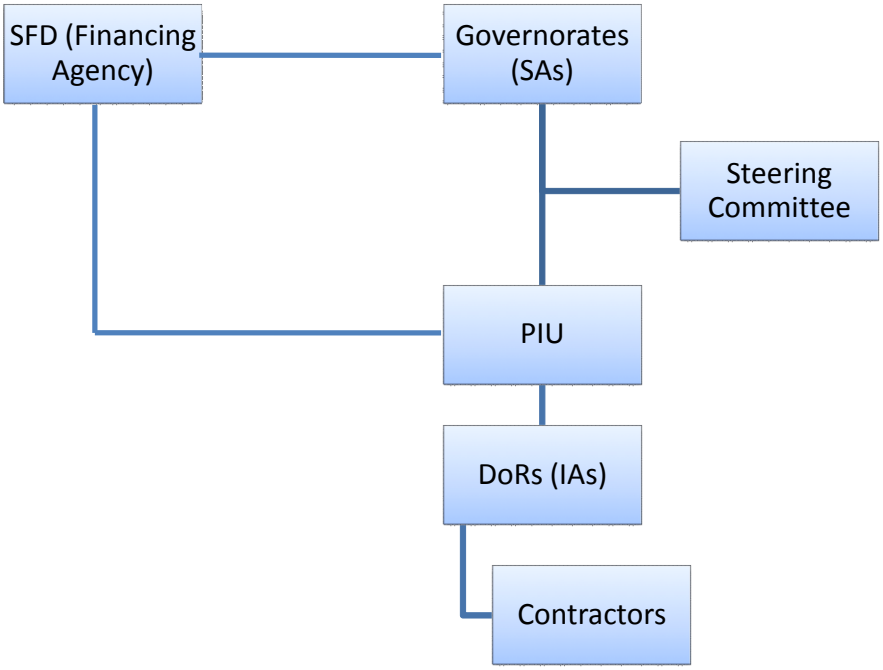
Paving and surfacing rural roads is limited to upgrading existing small compacted rocky roads by providing asphalt pavement in most of the projects. The maximum width of the roads included in these sub-projects is 5-6 meters of pavement, which is equivalent to about 7-8 meters of right-of-way. None of the subprojects will include increasing the right of way of existing roads.

The approximate duration of each sub-project will depend on length of the road, but will be an average of 6 month for each 1 km of road length. Prior to the start of construction works, the authorities responsible for the utilities (Electricity, water and communications) are informed about the rehabilitation works so as to relocate their assets away from the construction works, after this step is done the contractor starts working on paving and surfacing the road. The process usually includes the following activities:

- Clearing the right of way of the road from any materials or vehicles in coordination with the local inhabitants
- The base layer of the road is established using stones and, while filling materials (such as excavated soil from nearby constructions) could be used for adjusting the road level and the shoulders. The stones forming the base layer are imported by trucks from a registered quarry. Samples from these stones are frequently taken for analysis at the DoR labs.
- The base layer is compacted by standard rollers which could be supported with mechanical vibrators to ensure adequate compaction of the layer to safeguard against un-favored settlement
- The asphalt is imported from a registered asphalt mixer and delivered at the site, an asphalt paver is used to lay down and distribute the asphalt over the base layer.
- Other surfacing materials, such as paints and special bituminous materials, are imported from petroleum additives companies and is applied to the surface according to the engineering standards
- Water is used consistently during the process during the laying and compaction of the base layer. Water is usually brought from nearby canals by tankers.

The SAs for these sub-projects are the Governorates and the IAs are the Directorates of Roads (DoR) in the Governorates. The implementation of the projects will be carried out by the contractors according to the chart illustrated in Figure 2-1 below.

Figure 2-1 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 paving and surfacing of rural roads will achieve many environmental and social benefits including:

- Reducing dust emissions of passing vehicles on existing rocky roads, the asphalt pavement that will be provided will significantly reduce dust generation
- Improving access to isolated villages and rural settlements (Izba) which will alleviate many difficulties encountered by villagers during transportation from and to their villages. Improving access will facilitate trade exchange, access to educational and health services to target communities
- Upgrading rural roads will increase the real-estate value of the properties in the target villages

Most of the above benefits are subjective, and making a quantifiable documentation of them will be a complicated process with possible inaccurate results. Therefore the EMP will document the above benefits will be in terms of recording the population benefiting from the sub-projects.

The suggested measures for documenting environmental benefits are:

- The DoR at each Governorate should report on the villages and rural settlements that will benefit from each sub-project, and the correspondent population of each village/settlement.
- The DoR should make a photographic documentation of the road condition before and after installing the asphalt pavement.

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

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 "highways including bridges and tunnels" and "highways inside cities" classified as Class C, but the "paving and surfacing of rural roads" 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 paving and surfacing rural roads sub-projects 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 located in sensitive areas including natural protectorates[2] should be upgraded one level in the EIA classification.

The Governorates 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

[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

[2] There is at least one project located in an island, as further explained later, which is regarded as natural protectorates

the proper class of these sub-projects[3]. In case that a certain Form would be required, the DoRs 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 Governorates 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 as applicable, this should be carried out as soon as possible.
- The DoRs 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 Dust and Air Emissions

The unloading of stones at the project site is the main activity that is associated with generation of relatively large amount of airborne dust. Although the generated dust during unloading the stones is usually noticeably high in intensity, the dust cloud remains only for few minutes before the particles settle down. Accordingly the impact is mainly local at the unloading location and will only occur instantaneously during limited days of during the process. Dust generation impact in this project is expected to be less in magnitude than other rural roads pavement projects because the contractor will depend on labor intensive procedure, therefore some contractors will choose to unload the stones with manual means which will be associated with less dust emissions. The recommended mitigation measure is to protect the workers near the unloading area with dust masks. Impacts on nearby residential units are expected to be less in magnitude, and if the households had prior notification of such actions they can make some precautions to avoid exposure to the dust. Normally local households show high degree of tolerance towards such minor impacts in return with the expected benefits from the project.

Other dust emissions will be during the laying of the base layer and passing of the road roller for compacting the layer. These dust emissions will be relatively minor as the application of water during the compaction process, which is a common practice, will significantly reduce dust emissions.

[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

Besides the dust emissions, sometimes the contractor needs to heat up some bituminous materials at the site so as to add them in a special surface. Usually such process is done by heating a metal barrel containing the bituminous material by the available fuel near the site; there are no standard limitations of the type of used fuel. Open burning of wood, or other loose materials, for such purpose will not be a favored option from the environmental perspective in order to minimize black smoke and emissions of incomplete combustion. Therefore, the minimum requirement that has been identified in this EMP is to use a controlled burner and LPG bottle that should be safely stored and used.

Furthermore, there will be other emissions to the air from the exhaust of construction machines (such as rollers, loaders, pavers and trucks), such emissions are expected to have only minor effect on the ambient air quality, and the control of such exhausts is normally done by Traffic Departments during the licensing procedure. Accordingly, no further steps are required to be taken locally at the site.

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

- The contractor should provide site workers with adequate PPE including masks for those who will work in unloading stones trucks and in other dust generating activities.
- In case unloading stones will be carried out near a residential area, the households in that area should be notified, at least one day before the unloading, with the time and location of the unloading process, this could be done through placing a poster, or similar means of notification, at a location that could be observed by the households. Such posters, if applied, should be photographed and included in the EMP progress report.
- No open burning of woods or loose materials for heating bituminous barrels is allowed. In case such heating is needed the contractor should use a controlled burner fed by fuel gas (such as LPG), the process should be carried out according to safety standards.

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

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

3.4 Noise and Vibrations

There will be many activities that will cause noise and vibrations including the compaction of soil and base layer, the unloading of stones and other materials and the movements of vehicles and equipment. The workers who will be near such activities need to use ear muffs, especially if they are close to compactors and vibrators. The noise impacts on nearby residential units are expected to be less in magnitude, and if these noisy activities were performed during daytime the impact on the

ambient noise levels would be minimum[4]. Again, because the local community expects many benefits from the roads improvements, they generally tolerate with such temporary impacts.

The operation of compactor rollers with mechanical vibrators could impact nearby week structures. In such cases, according to the information provided by DoRs, no mechanical vibrators are used to avoid impacting the stability of such structures, but there is no documented set of standard rules to avoid using mechanical vibrators besides weak structures. Therefore, the EMP is recommending documenting this procedure in the EMP.

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

- The workers should be provided with PPE including ear muffs for workers who will work near noisy activities
- The work should only be carried out during daytime, and night work is not allowed.
- Prior to starting the work the DoR should make an observation of the structures located on both sides of the road, and for road lengths located near weak structures (such as clay building and cracked structures) the DoR should instruct the contractor not to operate mechanical vibrators.

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

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

3.5 Risks of Inadequate Waste Management Procedures

The site clearance works may involve removal of some materials accumulated on sides of the roads. Usually these accumulations are materials stored by local residence, especially farmers, such as animal feed, hay, some agriculture equipment …etc. The common practice is that the local residents are notified prior to starting the work to remove any belongings from the road right of way, and they usually positively respond and transfer these belongings to other places. Normally the roads right of way do not include waste accumulations in order to maintain the traffic flow, however, in some cases the contractor will need to remove some wasted materials to clear the site, in such cases it will be important to adequately handle this waste, transport it in a covered waste truck and dispose it in an authorized disposal site.

In some occasions the site preparation will include excavation and filling works to adjust the slopes of the road. Usually the excavated soil is used for filling, and because significant amounts of soil are used in the sub-base layer for adjusting the level usually no excess soil remains for disposal.

[4] Generally working in rural areas is performed during the day because street illumination is not available in most cases

Regarding the waste generated from the construction staff, it is expected that such waste will be minimum because no camps will be established for staff; therefore littering waste is expected to be of a minor quantity.

During the operation of the roads, after the construction phase, there will be waste issues related to littering of the vehicles, and sometimes from waste trucks, which pass through the road. Waste management is generally the responsibility of the Local Authority, and DoRs are responsible for the maintenance of the road during the operation phase, the duties of the DoRs do not include waste removal from the road sides. Although the upgrading of the roads (through asphalting and paving) will increase the traffic volume and will, accordingly, increase the possibility of littering on its sides. Because prevention/removal of such littering could not assigned to DoRs or the PIU, the measures that could be taken through this EMP is the monitoring of any waste accumulations on the sides of the roads during the project implementation period, and the beautification of the roads by tree planting, in roads that do not have trees on their sides[5], to improve the aesthetic value of the area.

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 DoR should request identification of the authorized disposal site from the Local Authority through an official letter. The DoR 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 the authorized disposal site. The truck should be tightly covered before moving to the disposal site. The DoRs 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 on the road sides. No waste should be left behind at the end of each working day. DoRs should ask their site engineers, who will provide site supervision on the quality of the works, to also supervise this measure.
- For roads that do not pass through trees, the DoR should consider planting trees at the road sides according to the available area. This measure is not compulsory for each single road and for all the paved length, it is rather left to the DoR to decide the suitable locations for tree planting in roads passing desert or urban areas.

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.

[5] Some of the roads already pass through areas rich of trees and do not need further tree plantation

- The DoR 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.
- The DoR should report on the number of planted trees on road sides and the location of these trees
- The DoR should observe any waste accumulations on the road sides during the operation phase, location of these accumulations (length and side of the road) should be identified in the progress reports.

3.6 Issues related to the Nile Islands

Some of the sub-project locations could be in an island in the Nile. Because not all of the sub-project locations, have been identified as per the preparation of this EMP, there may also be other sub-projects implemented in Nile islands.

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 Prime Minister. 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 sub-project that could be implemented in an Island is believed to be highly important to the island inhabitants. Consequently the inhabitants should be moved to the highlands of the island which is characterized by complex topography. Expectedly, the island does not include any paved roads (asphalt nor rocky), the island rather has an alley that connects the main residential complex with the boat jetty, this alley is not good for moving vehicles as it is narrow, has steep slopes and high elevations, therefore it is currently only used for pedestrians and animals. This makes the access of inhabitants to facilities out of the island and back to their homes very difficult especially for elderly people and those who need emergency healthcare services. The Island Road sub-project is expected to be upgraded to a concrete paved road, with no asphalt surface. The difficulty of access of heavy equipment will make the pavement of this road depending on manual tools, such as manual excavation and filling, manual compactors, manual mixing of concrete …etc.

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

The first is related to waste management aspects. According to satellite images of the island there are no solid waste disposal sites, therefore there should be special arrangements to transport any generated waste during site clearance or during construction process to the other side of the Nile by

available boats. It is worth noting that no barges could sail to the island, but goods and people reach the island through small boats. Accordingly waste materials should be collected in suitable bags and transferred to the other bank in the available boats.

The second 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 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 additional mitigation measures are recommended to minimize the above risks:

- The DoR 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 DoR should include disposing such waste at the identified disposal site in the tender documents and contracts with the contractors.
- The contractor should arrange for collecting waste materials in suitable bags and to transfer them through manual means (such as manual pushed carts) to the island jetty, then transfer them by boat to the other side of the Nile, where the waste bags will be loaded to a suitable truck that will transfer them to the disposal site with its cargo box covered, as mentioned earlier. The DoRs 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 out of the island through keeping records of the number of truck trips to the disposal site and the capacity of the truck.
- The DoR 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.

3.7 Issues related to Known and Unknown Antiquities

The possible negative impact on existing antiquity structures is the soil vibrations associated with operating mechanical vibrators for soil compaction, which affects a limited area around the subject site. The initial review of the available sub-project locations indicated that no nearby antiquity sites, but there may be few exceptions for sub-projects in which their locations are not yet confirmed. In

such cases the Antiquity Administration in subject 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, the EMP include measures to adequately manage such cases.

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

- For sub-project locations near antiquity sites, The DoR should inform the Antiquity Administration in subject Governorates informing them the exact locations of the sub-projects and request advise about any restrictions on the work at such locations
- The restrictions of the 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 DoR 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 not require Interventions from the EMP

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

The existing roads, where the sub-projects will be implemented, comprise utility lines including water supply pipes, power lines, communication lines and sewerage lines in some cases[6]. The common practice for avoiding damaging any utility is that the DoR asks the companies owning these utilities to remove any pipes or cables located in the road so that the site could be delivered to the contractor to start the paving works. Accordingly, if a water pipe is located in the middle of the road the Water and Wastewater Company divert it to one of the road sides; the same applies to any elevated or buried power and communication lines. The sewerage lines are normally deeply buried under the construction level, therefore it is usually left at its location with only adjusting manholes to coincide with the new level of the paved road. The diversion of the utilities before the contractor starts his work eliminates any risk of damaging utilities by the contractor during the paving and surfacing work. Because the handling of the diversion process of the utilities is done by the correspondent owning company the associated environmental and social issues, such as temporary

[6] Many rural areas do not have sewerage services

cutting of the service and handling of waste, are considered among the responsibilities of the owning company and, hence, no further specific measures would be included in this EMP.

There are many issues related to the operation of the roads consequent to the expected increased traffic volume. These issues include increased waste littering, which has been discussed earlier, increased noise levels from vehicles, increase vehicle exhaust emissions and increased risk of establishing informal settlements on the road sides. Because the implementation period of the EEIP is three years, most of the roads will only involve short period of operation during the EEIP implementation, therefore managing the above issues will be beyond the scope of this EMP. In general terms, the roads will have many environmental and social benefits, and these impacts related to increased traffic volume are limited and could be mitigated through improved inspection and monitoring performance of competent authorities.

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 paving equipment and the risks related to the boat sailing with materials and wastes to and from the island(s). All these impacts are considered to be 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 number of villages/settlements that will benefit from the road and their corresponding populations	DoR	Governorates and SFD	Review progress reports
	Photographic documentation for the roads condition before and after asphalt pavement	DoR	Governorates 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	Governorates	SFD	Review correspondence with EEAA
	In case an EIA Form is required, these forms should be timely prepared and followed up with EEAA	DoRs	Governorates and SFD	Review correspondence with EEAA
Dust and air emissions	Workers near unloading area of stones trucks and other dusty operations should be provided with PPE including dust masks	Contractor	DoRs	Site supervision
	Households located near unloading area of stones trucks should be notified about the unloading time at least 24 hours before the unloading. Any posters or notification tool should be photographed for documentation.	Contractor	DoRs	Site supervision
	Heating of bituminous materials at site should be only by controlled burners and LPG fuel according to safety standards	Contractor	DoRs	Site supervision

Issue	Proposed Mitigation Measures	Responsibility for Implementation	Responsibility of direct supervision	Means of supervision
Noise and vibrations	Workers nears noisy operations should be provided with PPE including ear muffs	Contractor	DoRs	Site supervision
	work should not be carried out during nighttime	Contractor	DoRs	Site supervision
	Work near weak structures should not include operation of mechanical vibrators	Contractor	DoRs	Site supervision
Risk of inadequate waste management procedures	Identify the authorized disposal site by requesting official letter from the Local Authority	DoR	Governorates 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	DoR	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	DoR	Site supervision
	Plant trees on the road sides at areas where the roads pass through desert or urban unplanted area. This is not a compulsory measure for all roads and left to the DoR to determine	DoR	Governorates and SFD	Review progress reports
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	DoR	Governorates 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 boat, 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	DoR	Site supervision
Issues related to known and unknown antiquities	For the sub-projects located near antiquity sites the Antiquity Administration need to be informed about the locations of the sub-projects and if they have any restrictions	DoR	Governorates	Review correspondence with Antiquity Administration In the concerned governorates.
	In case of any conditions from the Antiquity Administration, these conditions need to be included in the contractor contract	DoR for inclusion in the contract and contractor for execution	DoR and Governorates	Review contract with contractors and DoR providing site 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	DoR	Site supervision

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

Issue	Monitoring Indicator	Monitoring Location	Monitoring Methods	Monitoring Frequency	Monitoring Responsibility
Dust and air emissions	Number of received complaints from dust emissions	Sub-project locations and DoR local offices	Recording number of received complaints	To be reported on quarterly basis	DoR
Noise and vibrations	Number of received complaints from noise and vibrations	Sub-project locations and DoR local offices	Recording number of received complaints	To be reported on quarterly basis	DoR
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	Once after the removal of the waste	Contractor
	Number of received complaints from unauthorized waste disposal	Sub-project locations and DoR local offices	Recording number of received complaints	To be reported on quarterly basis	DoR
	Number of planted trees	Sub-project locations	Recording number of planted trees, their type, location on the road (km of road and which side) with photograph documentation	To be reported on quarterly basis	DoR

Issue	Monitoring Indicator	Monitoring Location	Monitoring Methods	Monitoring Frequency	Monitoring Responsibility
	Littering waste during the operation period	Sub-project locations	Observing areas of waste accumulation on road sides and their location (km of road and which side) with photograph documentation	To be reported on quarterly basis	DoR
Issues related to the Nile islands	Volume of waste transferred out of the island	Sub-project locations in islands	Counting number of truck trips and multiply by truck capacity	Once after the removal of the waste	Contractor
	Number of received complaints	Sub-project locations in islands and DoI local offices	Recording number of received complaints	To be reported on quarterly basis	DoR
Issues related to known or unknown antiquities	Number of received complaints from Antiquity Administration	Sub-project locations and DoR local offices	Recording number of received complaints	To be reported on quarterly basis	DoR

4 Administrative Framework for Implementing the EMP

4.1 Implementation Responsibilities

Table 3-1 and Table 3-2 indicate the responsibilities for implementation and supervision of the EMP measures which mainly falls on the SFD, Governorates, DoRs and contractors. The responsibilities of the SA and the IA (Governorates and DoRs 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 DoR; 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 SAs 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 items of this report is indicated in Annex 3. The progress reports should also include indication to any correspondence with EEAA and other authorities; such correspondence should be annexed to the report. The SAs 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 SAs 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 Governorates and DoRs 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 DoRs 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 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
- Tree planting in areas where the DoRs will identify for improving the aesthetic value of the road
- 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 either included among the responsibilities of the contractors on the tendering procedure, or, for additional consultancy service, included in the available project budget.

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. 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 (Governorates) should comply with the following EMP measures:

- Send an official letter to EEAA requesting the adequate classification of Paving and Surfacing Rural Roads 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 the 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 Roads at concerned Governorates) should comply with the following EMP measures:

- Reporting the number of villages/settlements that will benefit from each road and their correspondent populations. This should be included in the first EMP quarterly report submitted to the Governorate. The DoR should keep photographic documentation of the roads before and after the implementation of the project.
- 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.
- The DoRs should identify areas where weak structures, that may have stability issues subsequent to vibrations, are located near roads that will be paved. The DoRs should add a condition at the contractor contract to avoid operation of mechanical vibrators or any machinery that could affect these structures
- The DoRs should identify roads that will pass through unplanted areas, including desert areas urban areas and other areas where the road sides will be suitable for tree-plantation.

The DoRs should arrange for planting trees at these identified areas and should report the number, type and location of planted trees in 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.
- The site engineer of the DoR 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
- The DoR should observe any littering waste accumulated on the road sides during its operation. The DoR should make record the location of any accumulated waste, document it through photography and report it in the following quarterly progress report.
- The DoRs should prepare complaint's log about the sub-project, this log will include records of any complaints from the local community on unauthorized disposal, dust, noise and vibrations. Recorded relevant complaints and measures taken in response to the complaint should be included in the project progress reports.
- The DoR 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)* All wasted materials should be collected in suitable waste bags loaded to a suitable boat to transfer the waste to the other side of the Nile, and then the above two measures should be implemented
- The contractor should provide an appropriate cover to the waste vehicles and should not allow the vehicle to move without cover. Number of vehicles trips and capacity of each vehicle should be recorded by the contractor
- *(To be included only if unloading stones trucks will be near residential areas)* The contractor should inform the inhabitants of ___(to be filled according to location)_____ area with the unloading of stones trucks 24 hours before the unloading. This should be done through _____(for example hanging a poster or other means as defined by DoR) ____
- Heating of materials onsite should not be done by open burning of loose materials, the contractor should arrange the use of liquid fuel and controlled burner that should be operated according to adequate safety procedures and approval of relevant authorities
- The contractor should provide for each waste worker a dust mask, and an ear muff and other PPE as appropriate.
- Work is only allowed between 07:00 and 18:00, no night work is allowed
- *(To be included if applicable)* No mechanical vibrators should be allowed at ___(to be filled according to location)_____ area.
- *(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 DoR

Quarterly Report Information	Quarterly report No: ----- Covering period from: ---------- to ---------- Prepared by: ----------(DoR assigned staff) Approved by: ----------(Governorate assigned staff)
Sub-project information	Governorate: ---------- District: ---------- Address: ---------- Length of Road: ---------- Names of villages/settlements served by the project and the population of each: Village/Settlement Name: ---------- Population:---------- Village/Settlement Name: ---------- Population:---------- Village/Settlement Name: ---------- Population:----------
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 DoR staff that has been supervising the site work ---------- Please check the following according to site supervision observations: - Are photos showing the road before and after the project implementation 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 dusty operations and ear muffs for those who work near noisy equipment)? If no please state reason and actions taken ---------- - Has the contractor notified nearby inhabitants of stones unloading operations at least 24 hours in advance? If yes please state the followed tools of notification and If no please state reason and actions taken ---------- - Has the contractor heated any materials for surfacing the roads? If yes please state the used fuel, and if the contractor has burnt loose materials please state the reason and actions taken ---------- - Has the contractor worker overnight? If yes please state the reason and actions taken ---------- - Is there any week structures near the construction site (i.e. clay structures – cracking structures or other structures that could be affected by vibrations)? If yes was any mechanical vibrators or any equipment generate vibrations used? If yes please state the reason and the actions taken ---------- - Was the waste disposed by a suitable truck with cargo box covered 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 the site litter collected at the end of each working day? If no please state reason and actions taken ---------- *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*

Tree plantation	Has there been any tree plantation at the road sides? If no please state the reason ---------- If the answer to the previous question is yes please fill the following data: Location of trees at the road: From ----- km to ------km on the ------ side Number of trees: ------ Average distance between trees ------ Type of trees: ----- Is photographic documentation of planted trees attached to this report or previous reports? If no please state the reason ----------
Waste littering during the operation phase	Have there been any waste accumulations at the road sides during the operation? If the answer to the previous question is yes please fill the following data: Location of waste accumulations at the road: From ----- km to ------km on the ------ side From ----- km to ------km on the ------ side From ----- km to ------km on the ------ side From ----- km to ------km on the ------ side Is photographic documentation of accumulated attached to this report or previous reports? If no please state the reason ----------
Work in islands (to be filled only for sub-projects located in islands)	Has site clearance waste been transferred to the other bank by boat? If no please state reason and actions taken ----------

Work near antiquity sites (to be filled 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 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: ---------- - Unacceptable noise and vibrations? 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

الصندوق الاجتماعى للتنمية
SFD 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