

Environmental Management System Handbook

Version 2.0

2015

This handbook was prepared by the Safety, Health and Environment unit in the Sustainable Infrastructure Practice Group (SIPG) of the United Nations Office for Project Services (UNOPS)

Marmorvej 51, PO Box 2695
2100 Copenhagen, Denmark
Tel: +45 4533 5000

The Handbook is a living document and is intended to be a tool for learning and improving the quality of environmental management in infrastructure projects. Please send comments on environmental management in general or on issues in this document, highlighting gaps, omissions and areas that need more development to Infrastructure@unops.org or to ItaiM@unops.org (HSE Manager).

ENVIRONMENTAL MANAGEMENT SYSTEM HANDBOOK

Version 2.0

EMS Documents Approved for Use by	Signature and Date
Head of Construction Management, SIPG	James Galloway 03.06.2015
HSE Manager, SIPG	Itai Mukuvari 03.06.2015

UNOPS Sustainable Infrastructure Practice Group

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List of Acronyms and Abbreviations Used

EA	Environmental Assessment
EIA	Environmental Impact Assessment
EMP	Environmental Management Plan
EMS	Environmental Management System
ER	Environmental Review
ERP	Enterprise Resource Planning
ESIA	Environmental & Social Impact Assessment
GREI	Generic Register of Environmental Impacts
HSE	Health, Safety & Environment
H:V	Horizontal to Vertical Slope
H&S	Health and Safety
OD	Organizational Directive
PEMP	Project Environmental Management Plan
PL	Pit Latrine
PM	Project Manager
PPE	Personal Protective Equipment
PVC	Polyvinyl Chloride
SHEQ	Safety, Health, Environment & Quality
Qt	Quarter
REI	Register of Environmental Impact
RR	Resulting Records
SEMP	Site Environmental Management Plan
SIPG	Sustainable Infrastructure Practice Group
TBA	To be announced
TOR	Terms of Reference
UN	United Nations
UNOPS	United Nations Office for Project Services
USAID	United States Agency for International Development
VOC	Volatile Organic Compounds
VIP	Ventilated Improved Pit latrine

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Preface

Version 2 of the Environmental handbook reflects the expansion of the EMS as it shows the fact that infrastructure operations, which were the initial target of the UNOPS EMS, have a larger footprint than just the construction site. For example, UNOPS personnel usually have an office at another location away from the construction site from where project management and support is carried out. Another consideration is also that other UNOPS business units that deal with procurement, project management and management of facilities are now developing environmental management systems. Therefore, it makes sense that the UNOPS EMS should evolve and embrace the increasing scope and efforts in continuous improvement.

The purpose of the Handbook is to ensure that all environmental impacts of a project that are within UNOPS control and influence have been considered and addressed throughout the lifecycle of the intervention. The process allows for the identification of environmental risks and/or opportunities during the early stages so that they can be managed in a coherent, effective and efficient manner.

The templates, guidelines and toolbox talks put in the previous version of the handbook were removed so that users keep up with the latest versions of the templates on the intranet.

We hope the handbook will be utilized regularly by the project management and other stakeholders, the UNOPS SIPG will also be regularly revisiting the report. As a result of lessons learned in the field and from our partners, we will continue to build upon this living document and ensure that best practices can become even better.

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V 1.0	28-3-2014	Itai Mukuvari
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Sustainable Infrastructure Practice Group (SIPG)

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1. UNOPS Environmental Policy

Issued as Organizational Directive (OD) 40, the Environmental Policy provides overall direction as to how environmental issues are treated in UNOPS. The policy has been signed by the Executive Director and is available on the UNOPS intranet for all personnel working in infrastructure.¹

2. Scope of the EMS

The scope of the UNOPS EMS System is: The provision of implementation services for the planning, design and construction management of physical infrastructure projects to partners working in peacebuilding, humanitarian and development operations. In 2015, this covered infrastructure operations in Copenhagen (UNOPS HQ), Jerusalem office, Pristina office, Afghanistan office, Sri Lanka Office and Guatemala office.

The planning for the EMS starts when a project is being developed. At the lead-generation stage, the project developer is required to determine whether the project is part of the Physical Infrastructure Practice, and to indicate the determination in the relevant Leads System entry under the Practice Tab.

If the project contains elements relevant to Physical Infrastructure Practice, the procedures associated with the implementation of the Environmental Management System (EMS) apply. The Developer shall move to the next stage and complete the Environmental Screening (ES). All infrastructure projects shall develop Environmental Management Plans (EMPs), Health and Safety plans and quality plans during project initiation. EMS considerations shall be included in the design process of infrastructure through the guidance given in the design manual. This guidance includes considerations for HS during construction, as well as for the post-construction use of the infrastructure.

Summary of the UNOPS Environmental Policy

UNOPS infrastructure operations endeavour to design and implement infrastructure projects in a manner that respects the principles of environmental responsibility and sustainability, including preventing or mitigating adverse impacts on the environment and identifying strategies for improved environmental performance.

This means that UNOPS will seek to:

- prevent pollution;
- reduce the impact of waste through minimising, reusing and recycling waste;
- incorporate energy efficiency options during the design and construction phases of the project;
- protect and promote biodiversity;
- meet or exceed legal requirements of the project location; and
- continuously seek opportunities to improve the performance and monitoring of the system.

¹ It should be noted that a review of the policy will occur every two years. A copy of the current policy is [available in Appendix 1](#).

3. EMS objectives, targets and action plan

Setting of objectives, targets and plans

EMS objectives and targets, which are measurable and practical, shall be set at the beginning of the year in order to ensure that UNOPS meets the commitments in the Environmental policy, requirements of the UN system and any other relevant requirements and the commitment to continuously improve. Objectives and targets for infrastructure operations shall also plan to meet legal and other requirements of the location. Objectives and targets shall be set at corporate level to cover the whole EMS. Objectives and targets shall also be set at country/site level to cover activities in particular countries. Currently the setting of objectives is at these two levels however, more levels may be required to set objectives in future.

Objectives should be consistent with the Environmental policy and should address changes

Objectives and targets should be consistent with the Environmental policy (OD 40) which includes the intent of preventing pollution, meeting legal and other requirements and ensuring that continuous improvement happens. Objectives and targets should also be set in order to address environmental impacts. It is important that objectives and targets remain relevant to changes in the operations. Therefore, consideration should be given to Technological, financial, operational and stakeholder (Interested party) issues.

Program to address Objectives and Targets

Specific action plan(s) shall be put in place to address the Objectives and Targets. Responsibility and a timeline shall be assigned to each action point. There shall also be a means of periodically measuring progress. Quarterly review progress on Objectives, Targets and Action plans is recommended. The most recent copy of objectives, targets and plan is found on the intranet.

4. EMS Responsibilities

All UNOPS employees have a responsibility to address environmental concerns wherever they operate. Employees are responsible for:

- stopping work if they identify anything that could cause harm to people or the environment;
- reporting pollution/spilling incidents;
- assisting in incident investigations;
- identifying, reporting and eliminating (if within their authority and ability) hazards to the environment;
- contributing to the positive environmental performance of the project i.e. minimize waste and energy use; and
- complying with the UNOPS policies, relevant legislations and Project Environmental Management Plan (PEMP).

In addition, the following roles have been identified as having specific responsibilities:

- Executive Director
- Regional Director
- HSE Manager
- HSE Regional Advisor
- Infrastructure Practice Director
- HSE Coordinator
- HSE Site Coordinator
- SHEQ Taskforce
- Project Manager
- Project Developer

Executive Director

The Executive Director holds the ultimate responsibility for the implementation of the UNOPS SIPG PEMP within the organization as a whole.

Infrastructure Practice Director

The Sustainable Infrastructure Practice Director is responsible for the implementation of the UNOPS PEMP within the Infrastructure Practice Group. He/she is responsible for:

- establishing and implementing effective arrangements across the Practice to ensure the requirements of the PEMP are met; and
- issuing instructions, guidance and tools that may be necessary to effect the implementation of the PEMP.

Regional Director

The Regional Director is responsible for the implementation of the UNOPS infrastructure PEMP within the Region. She/he shall ensure that suitable resources and sufficient funds are employed to manage and operate the EMS

Head of Construction Management

The Head of Construction Management is responsible for ensuring that EMS is adequately considered in construction management by offering relevant technical advice and oversight.

Head of Planning and Design

The Head of Planning and Design is responsible for ensuring that infrastructure planning and design processes adequately consider EMS. He/she should give technical guidance and provide tools that field operations will use in the planning and designing process of infrastructure works.

Regional Infrastructure Lead

The Regional Infrastructure Lead shall provide technical advice on EMS matters and assist field teams in their access to the available EMS resources.

HSE Manager

The HSE Manager holds the overall responsibility for implementation of the Sustainable Infrastructure Practice PEMP and operation of the EMS compliant with the requirements of the ISO 14001 Standard globally. He/she shall:

- ensure that the PEMP is regularly reviewed and communicated to stakeholders (both internally and externally);
- prepare the system and assist in the carrying-out of internal and external system audits;
- ensure that audit schedules are in place for the regional offices;
- ensure that the training schedule is prepared and arrange training courses as required;
- ensure that the system objectives and targets are set, monitored, reviewed and up-to-date;
- arrange and participate in the management system reviews to ensure performance evaluation and compliance with standards;
- collate feedback on the EMS (documents, procedures), review them and implement improvements;
- collate information regarding environmental performance of the regions/offices, analyse trends and propose necessary actions;
- collect information on environmental incidents; ensure that preventative actions are completed; and
- facilitate the exchange of the information about environmental incidents and best practices across the organization.

HSE Coordinator

The HSE Coordinator holds an overall responsibility for the implementation of the PEMP and the operation of the EMS in compliance with the requirements of the ISO 14001 Standard within the project office. She/he shall:

- ensure that environmental management plans are formulated prior to the commencement of work and that the information is appropriate and updated through the period of the contract;
- collate information regarding the environmental performance of the projects, analyse trends and propose necessary actions;
- ensure regular inspections and audits of sites/projects to determine that work is being carried out in accordance with policy and the relevant statutory provisions; and
- collect information on environmental incidents and ensure that preventative actions are completed.

HSE Site Coordinator

The site HSE Coordinator assists the project/site/location manager to ensure the environmental compliance of site activities. The responsibilities include:

- reviewing the Site Environmental Management Plan (SEMP) and keeping it up-to-date;
- ensuring that the relevant environmental documentation is in place;
- conducting regular environmental inspections;
- chairing the Quality, Environmental, Safety Task Force meetings;
- ensuring that records of the Task Force meeting minutes are circulated to relevant stakeholders;
- liaising with management to facilitate environmental improvement where deficiencies have been highlighted and responding to observations/comments from personnel with environmental concerns;
- ensuring that environmental awareness talks (or toolbox talks) are undertaken;
- assisting in site induction preparations and/or presentations;
- ensuring that adequate emergency guidance is developed for the site/location;
- assisting in environmental incident investigation;
- implementing remedial and preventative actions if applicable; and
- ensuring that all workers on-site receive site induction and relevant environmental information, instruction and training.

SHEQ Taskforce

A Quality, Environmental and Safety (SHEQ) Task Force will be created on each site. At minimum, it shall consist of the relevant representative of the site management team, a representative of employees and a representative of the Contractor. The role of the SHEQ Task Force will be to review the health and safety, environmental and quality practices and make recommendations to improve performance on-site and, ultimately, throughout the system. The

SHEQ Task Force will conduct the regular meetings, the results of which will be documented and archived.

Project Manager (PM)

The PM holds the ultimate responsibility and accountability for the environmental performance of the project. In this capacity, the PM shall:

- prepare the PEMP and SEMP for the project;
- communicate the information and requirements of the EMS to consultants and contractors;
- communicate, cooperate and coordinate between employees, contractors and other involved parties with respect to the environmental issues;
- liaise with the design team (if applicable) in terms of the environmental compliance;
- Appoint the HSE Site Coordinator and others with environmental responsibilities as necessary;
- conduct monthly reporting of performance to the HSE Coordinator; and
- take remedial actions following environmental incident are completed and investigation reports are passed to the HSE Coordinator

PMs shall also act as a main contact point with the authorities and ensure that any required licences, consents and other authorisations are secured and signed.

Project Developer

The main responsibility of the Project Developer is to ensure that environmental considerations are included in development of the project and that relevant parties (UNOPS, Donor, and Beneficiary) are aware of the potential environmental risks. This includes:

- ensuring that the environmental screening tool is completed and attached to the Lead System;
- acting upon findings of the environmental screening (e.g. liaison with HSE Advisor or regional director and/or engaging with the Donor; and, if necessary,
- arranging for the conducting of the Environmental Assessment (EA).

The diagram below shows some of the people who have responsibility for Health, safety and Environmental Issues in UNOPS:

5. Purpose and overview

The purpose of the process is to ensure that all environmental impacts of the project that are within UNOPS control and influence have been considered and addressed throughout the project life. The process will allow for the identification of environmental risks and/or opportunities during the early stages so that they can be managed in a coherent, effective and efficient manner.

The input consists of a project brief that outlines scope of work, purpose and location of the project.

The table below outlines how the EMS aligns with the project management cycle. For details on the steps in the project management cycle, kindly refer to the instructions and supporting guidance issued by the Project Management Practice Group.

The EMS and Project Management Cycle						
#	Key Step	Responsible	Approver	Consulted	Templates/Tools	RR*
1	Lead Generation: check for EMS applicability	Developer	HSE Manager		Questions are integrated in the Leads System	
2	Pre-Engagement: conduct Environmental Screening	Developer	HSE Manager		Template: Environmental Screening Report	*
3	Initiation: conduct an Environmental Assessment	Developer/ PM			Terms of Reference for EIA Template: ER Report or other compliant format (i.e. Donor's template)	
4	Initiation: develop the PEMP	PM		HSE Coordinator	Template: PEMP or other compliant format (i.e. Donor's template)	*
5	Subsequent Stages: <ul style="list-style-type: none"> complete the SEMP, communicate it to the contractor, and attach it to the project contract documentation translate the PEMP in to the site-specific Register of Environmental Impact (REI) 	PM		HSE Coordinator	Template: SEMP Register of Environmental impacts (REI) or other compliant format (i.e. Donor's template)	*
6	Subsequent stages: <ul style="list-style-type: none"> ensure implementation of environmental mitigation measures listed in the REI monitor performance of project with regard to environmental mitigation measures 	Contractor and PM HSE Site Coordinator			Template: HSE Inspection Report	*
7	Subsequent Stages: conduct project compliance evaluation review	HSE Advisor (regional) /HSE Auditor			Template: EMS Project Internal Review Checklist	*
8	Project Closure: <ul style="list-style-type: none"> report on result of implemented mitigation measures by using the appropriate column in the PEMP can be used as a basis for any donor reporting formats for EMS reporting 	PM				

*Resulting records must be kept for audit purposes.

Output

The two main outputs of this process are the primary tools for effective management of the environmental risk of the project:

- Project Environmental Management Plan (PEMP)
- Site Environmental Management Plan (SEMP)

Process Principles ²

If, following the results of the key Environmental Screening, a necessity for an EA or even a full Environmental Impact Assessment (EIA) has been established, but the Donor/Beneficiary is reluctant to finance or otherwise support the establishment of the same, the developer has the following options:

- further discuss with the Donor and explain the benefits of incorporating environmental considerations into the project, with the aim of obtaining an agreement on funding for duly assessing the project's environmental impact;
- submit the engagement for decision to Engagement Acceptance Committee;
- obtain funding to conduct an EA or an EIA from alternative sources;
- directly translate the Environmental Screening into a PEMP ³

Projects that are considered to be 'emergency projects' are required to complete at least the Environmental Screening. If, after the screening established the need to conduct either an EA or an EIA, the emergency circumstances of the project planning and implementation do not allow for conducting such an environmental assessment, and there is a critical need to deliver supplies (food, medicine), the decision to proceed should be made by the Engagement Acceptance Authority. Such decisions shall be recorded in the project documents and clearly communicated to the Donor/Beneficiary. If this has occurred, it is strongly recommended to compile a damage assessment and reinstatement plan upon completion of the project.

6. Environmental Screening

The Environmental Screening is designed to allow project developers to assess the level of environmental risk and plan appropriate actions for the subsequent stages of the project. The completion of the environmental screening will result in one of five recommendations:

1. no EA necessary (no or very low environmental risk);
2. EA completed by the Donor and meets UNOPS criteria (no significant environmental impact if mitigation and monitoring measures are included in the project);
3. Addendum to EA, completed by the Donor, required (no significant environmental impact if mitigation and monitoring measures are included in the project);

² Projects and project activities concerning procurement should follow principles of the Sustainable Procurement.
³ Note: costs for implementing related measures would still need to be integrated into the project budget.

4. Environmental Review (ER) needs to be completed (no significant environmental impact if mitigation and monitoring measures are included in the project); and
5. EIA necessary (potential significant environmental impact of the project).

The Environmental Screening is a simple questionnaire that should take no more than 15 to 20 minutes to complete. It should be completed at the pre-engagement stage.

The environmental screening allows us to:

- identify the level of environmental impact potentially generated by the project;
- assess whether an Environmental Assessment is required or not;
- inform the partner of this necessity to allow for adequate follow-up; and
- incorporate requirements of the environmental compliance in budget planning.

The Project Developer shall ensure that the environmental screening is completed and attached to the relevant Lead in the Leads System.

Considerations

The management of environmental aspects and impacts on the project will have budgetary implications, which shall be included in the discussion with project participants and potentially in the project budget.

The budget requirements can be summarised as follows:

- No EA needed (no or very low environmental risk) - no budget necessary;
- EA completed by the Donor - no budget required for preparation of the EA. However, there may be some cost associated with preparing the PEMP, and a budget will be necessary to implement the mitigation and monitoring measures included in it;
- EA or addendum to EA, completed by the Donor, required (no significant impact, if mitigation and monitoring measures are included in the project) - the project budget should consider incorporating the cost of undertaking an EA; a budget will be necessary to implement the mitigation and monitoring measures included in the PEMP; and
- Full EIA required (significant environmental impact) - a budget will be necessary for a specialized team to be contracted for the full EIA, as well as for the implementation of the recommendations of the full EIA.

The environmental screening should be recorded and the findings (particularly if requirement for full EIA or Environmental Review is identified) should be clearly communicated to project stakeholders.

7. Environmental Assessment (EA)

The EA is a process that aims to identify potential positive and negative impacts that a project may have on the environment. Depending on the size and complexity of the project, the EA may take form of an Environmental Review (ER) or an Environmental Impact Assessment (EIA). An EA shall be completed at the earliest possible stage of the project, ideally before an agreement with the Donor is signed. The requirement to conduct an EA may be included in the UNOPS scope of work.

Environmental Assessment

The EA makes it possible to identify potential environmental risks of the project and to plan the necessary actions to eliminate, control or mitigate these negative impacts, or, conversely, to potentially utilize or enhance the project's positive environmental impacts.

The findings of the EA may be important to the Beneficiary, as there may be impacts of the completed facilities that would have to be managed when the project's outputs are in operation. In addition, conducting an EA may be required by the legislations of Donor or Beneficiary countries. The Project Developer/Manager should establish whether an EA is necessary by completing the Environmental Screening. The study itself should be conducted by trained environmentalist (in case of an ER) or a team of experts (in case of an EIA).

Considerations

The EA, either in form of an ER or EIA, may be completed by the Donor. In such cases, the adequacy of such a review or impact assessment vis-a-vis UNOPS minimum requirements should be verified during the Environmental Screening.

If the EA is deemed to comply with UNOPS requirements, the Project Developer/Manager should proceed to the next stage, i.e. preparation of the PEMP.

If the Assessment is not deemed to comply with UNOPS requirements, missing elements shall be identified and rectified, in order to render the assessment and its documentation fully compliant.

It is strongly recommended that Project Developers/ Managers seek the assistance of personnel experienced with the preparation of EAs to verify the quality of the documents delivered by the Donor.

8. Environmental Review (ER)

The ER is a study conducted to identify the environmental, social and economic impacts of a project. It is a simplified version of the EIA. The chief aim is to identify environmental aspects and

impacts that are related to the project and find ways and means of reducing these adverse impacts.

The ER should consider all interactions between the project and the environment by identifying the negative and positive impacts the project may have at all stages of execution – including design and construction phases, but also in the ultimate operation and potential emergency situation.

The ER is usually conducted for small and medium infrastructure projects, such as the construction of buildings, small water and waste water treatment plants, roads etc. However, it should be noted that project size alone is not the final criterion.

ER should be done during early stages

The ER shall be completed at the early stage of the project, preferably before agreement with the Donor is finalised. If it is not possible to complete the ER at the initiation stage, it shall be clearly defined as potential risk and a time frame for the preparation of the ER report shall be specified in the project plan. Conducting the ER is important to all stakeholders as it allows for the identification of potential risk to the project. In addition, the findings of the ER may be important to the Beneficiary, as there may be impacts of the completed facilities that would have to be managed during operational stage. Finally, conducting an ER may be required by legislations of Donor or Beneficiary countries. The ER should be conducted by a person trained in environmental management. Depending on the local capabilities, the ER can be conducted in-house (UNOPS) or outsourced to external consultants.

Considerations

The ER should include the following elements:

- description of the project scope;
- description of the environment where the project is undertaken;
- description of how the project is going to interact with the environment (i.e. impacts);
- review of the relevant local legislations and other requirements; and
- recommendations for actions to mitigate negative impacts and enhance positive ones.

A UNOPS template report format can be used for the ER; however, other formats that provide additional information as required by the ER process can be used in lieu of the same.

Identified impacts should be communicated to the Donor (or other project participants) as they may have financial implications for the project. It is possible that the completed ER will identify a necessity to conduct a full EIA. If so, this first needs to be communicated to the Donors and other project participants.

9. Environmental Impact Assessment (EIA)

The EIA is a study conducted to identify the potential environmental, social and economic impacts of a project. The study considers both positive and negative impacts. It aims to foresee environmental impacts at an early stage in project planning in order to find ways and means to reduce these adverse impacts. The EIA also identifies opportunities for environmental enhancement by shaping the project to suit the local circumstances and presenting the predictions and options to the decision makers.

The EIA is crucial as it allows project developers to reduce the burden of environmental impacts that stand in the way of sustainable development. The EIA, as a national instrument, shall be undertaken for proposed activities that are likely to have a significant adverse impact on the environment and are subject to a decision of a competent national authority.

An EIA is usually conducted for large infrastructure projects that may result in a modification of the environment, such as dams, power stations, ports, airports, industrial plants, long distance roads and rail, projects resulting in modification to the environment, river basin or land developments and large scale irrigation.

EIA improves planning

If an EIA is required, it shall be completed at the early stage of the project, preferably before any agreement with the Donor is finalised. For UNOPS and its partners, it is extremely important to identify potential risks to the project and allow time for appropriate and responsive action. The EIA allows for better environmental planning and design of a project. A well-designed project can minimise risks and impacts on the environment and people, thereby helping to avoid the associated costs of remedial treatment or compensation for damage. In addition, the findings of the EIA may also be important to the Beneficiary, as there may be impacts of the completed facilities that would have to be managed during operational stage. Finally, conducting an EIA may be required by legislations of Donor or Beneficiary countries.

Carrying out an EIA

The EIA shall be conducted by a team of specialists (environmentalists, ecologists, hydrologists, sociologists etc.). These experts can be UNOPS staff or external consultants. In many cases, it is expected that external specialists will need to be hired to conduct a full EIA. A procurement process will have to be undertaken to contract the specialized EIA team and standard UNOPS contracts conditions shall be used. As a reference point for defining the scope of the assignment and expected deliverables, a Terms of Reference (TOR) for Environmental and Social Impact Assessment (ESIA) may be used. ⁴

⁴ Note - TOR for ESIA is a template and is indicative only, it will have to be adapted to individual project objectives and requirements (including the elimination or addition of sections).

Additionally:

- Conducting an EIA will require a budget which must be agreed upon with the Donor in advance.
- The EIA will result in a PEMP to be integrated in the project. This will require a budget for implementation. The budget for the PEMP, or flexibility in the project budget to take into account recommendations of the EIA, must be agreed with the Donor in advance.
- The World Bank notes that the cost of preparing an EIA rarely exceeds one per cent of the project costs.

10. Project Environmental Management Plan (PEMP)

Each project/infrastructure site must have a completed PEMP. The PEMP will summarise the environmental aspects and impacts that are relevant to the project and are within UNOPS control and influence. The PEMP shall be prepared at beginning of the project delivery stage. However, in some instances, Donors and/or Beneficiaries may require the development of such document during the initiation stage. It is required to demonstrate that environmental issues are considered in the project and that they are effectively managed. It helps to identify actions and keep track of their progress. It can be also used as a reporting tool for the Donor throughout the project and especially during project closure. It is the PM who is responsible for ensuring that PEMP is prepared for a project, updated on a regular basis and communicated to the relevant parties, such as the Donor/Beneficiary, designers or the project team.

Considerations

PEMP Guidelines	
Item	Note
Description of the environmental aspect and its impact	<p>When identifying environmental aspects, consideration shall be given to both normal and abnormal operations, as well as potential emergency conditions.</p> <p>Considerations shall also include supporting the infrastructure necessary to complete the project, i.e. construction of a temporary access road.</p> <p>Note: if the plan states that some of the aspects/impacts are not relevant to the project, the project team would have to be able to demonstrate on what basis such aspects/impacts have been excluded.</p>
Identification of the relevant legal (or other) requirements applicable to identified aspects/impacts	<p>The project-specific list of legal and other requirements will be developed for every project. It shall include all legislation that relates to the identified environmental aspects, as well as other relevant contractual agreements and guidance that is being used.</p> <p>The relevant legislation should be identified in the EA.</p> <p>It is recommended to undertake liaison and consultation activities with local authorities to identify applicable legislation.</p>

Assessment of aspect/impact significance	<p>Four categories to assess significance can be used:</p> <ul style="list-style-type: none"> • negative high; • negative medium; • negative low; and • positive. <p>Any aspect/impact whose management is stipulated by legislation or other requirements shall have high significance rating.</p>
Proposed actions/mitigation measures	<p>When and if possible, the mitigation measures shall:</p> <ul style="list-style-type: none"> • eliminate environmental risk/negative impact; • control or minimise the negative impact; and • maximise benefits of the positive impact. <p>If the design is included in the scope of UNOPS works, the PEMP shall clearly state environmental aspects and impacts (if any), that can be managed by the design.</p>
Allocation of the responsibility for completion of each action.	<p>It is the PM's responsibility to ensure that such cases are communicated to the relevant parties, including the design and construction teams, Donor and Beneficiaries etc.</p>
Project Environmental Objectives & Targets	<p>Environmental objectives and targets shall be established for each project. Objectives should include those already agreed with the Donor/Beneficiary. They may be aligned with the UNOPS general objectives, but can be also project specific, depending on the project's scope and stakeholders' requirements and objectives.</p> <p>As much as possible, project objectives should be SMART: Specific, Measurable, Achievable, Realistic and Time-related.</p> <p>The objectives shall be communicated to the Donor/Beneficiary to ensure that project objectives are aligned with stakeholders' objectives.</p> <p>Project Environmental Objectives shall be also recorded in the Project Initiation Document and subsequently transferred into the SEMP if applicable.</p> <p>The environmental objectives and targets shall be also be communicated to the project team.</p>

The PEMP shall be reviewed and updated on a regular basis to:

- ensure that identified actions are followed up and closed out;⁵
- document the status of each action;
- review the project's impact and compliance with standards;⁶ and
- evaluate performance, with regard to meeting project specific objectives and targets, and identify any additional actions needed.

At the end of the project, any residual environmental risks should be included on the project risk register and communicated to the Donor/Beneficiary. Alternatively, Donors' forms that contain the information as described above can be used.

⁵ It is recommended that documents supporting close out of the actions are identified in a timely manner.

⁶ It should be noted that, there may be additional aspects/impacts that have not been identified at the beginning of the project, as they may be related to the change in scope of the project.

11. Site Environmental Management Plan (SEMP)

The SEMP describes how UNOPS intends to manage the environmental impact of the construction. It will be prepared for every project that is required to do so according to the results of the Environmental Screening and as per the EMS applicability. Along with all associated documents, it will form an integrated part of the construction contract agreement.

Together with the PEMP, the SEMP is the basis for the site-specific Register of Environmental Impacts (REI), which in turn is the management tool for the site manager (UNOPS contractor or PM) to ultimately implement the required mitigation measures.

Use of SEMP

The SEMP shall be prepared prior to the construction phase of the project (i.e. during the tendering of the construction contract). The SEMP provides an overview on how UNOPS intends to manage environmental impacts of the construction works. Requirements specified in the SEMP must be communicated to the Contractors during tendering stage of the construction contracts to help them to understand the UNOPS standards and environmental site practices and allow them accurately price the contract accordingly to these requirements. The PM is responsible for ensuring that the SEMP is prepared and made available to the Contractors executing contracts.

Considerations

The main component of the SEMP is the REI. The REI summarises all aspects of site activities that may have adverse impacts on the environment and specifies controls that will be put in place to mitigate those impacts.

The REI should include ONLY aspects/impacts that have been identified in the PEMP as applicable to the specific site and which may have a significant impact on the environment and have to be managed on-site by implementing the relevant mitigation/control measures.

To assist with the development of the site specific REI, a Generic Register of Environmental Impacts (GREI) has been created. It records the 'standard' risks for the typical construction project with suggested controls. It must be noted that the impact and mitigations outlined in GREI should be reviewed for applicability and suitability for implementation in the individual project. Only mitigations/controls that can be realistically implemented on-site should be included in the site-specific REI.

In addition, the SEMP should:

- include environmental objectives and targets that are applicable to site operations/construction phase;
- assign environmental roles, i.e. SHEQ Site Coordinator and SHEQ Task Force on-site;
- define communication routes and methods, both internally and externally;
- provide information on emergency arrangements;

- outline monitoring and reporting requirements; and
- include a waste management plan if appropriate.

The SEMP and REI shall be regularly reviewed and updated to reflect changing conditions on-site. A template SEMP is [available in Appendix 5](#).

12. EMS Operational control

Control of the environmental aspects identified for the projects is achieved through actions indicated in the Environmental Assessment (EA), Project Environmental Management Plan (PEMP) and Site Environmental Management Plan (SEMP). In addition, EMS guidelines have been developed to help with addressing the significant impacts. These guidelines cover issues that include solid waste; borrow pit; protection of water; preservation of heritage sites and management of construction camps.

During the EA, environmental aspects and impacts will be identified, together with the necessary actions that either need to be undertaken to eliminate, minimise, or mitigate the potential negative impacts or to ensure that for positive impacts the environment enhancing measures are implemented.

A summary of the aspects, impact and mitigation measures that are within UNOPS influence and control will be summarised in the PEMP. The relevant actions shall be then undertaken by the designer's team or the construction/procurement team. Any actions/controls arising from the designer's review and applicable to the project execution (construction) will be subsequently passed on to the construction/procurement team.

During the construction stage, all impacts shall be controlled by measures identified in the SEMP. This plan shall be also used in the procurement of the construction contracts. During the project execution on-site, operational control will be achieved by regular monitoring and compliance evaluation of the site practices.

The environmental impacts of a project are reviewed during project reviews and may need to be communicated to the Donor and/or national authority. In addition, the PEMP may be reviewed as part of the quarterly assurance process. The implementation of the SEMP will be reviewed on a monthly basis.

The EMS guidelines described above have been made to address major environmental aspects and impacts and are therefore useful for informing the process of developing the PEMP and SEMP. However, where necessary, or where required by the Donor, PMs may create additional supporting procedures or controls at the project level. These additional procedures may be design or construction-orientated and should be outlined in the project documentation.

13. Performance Monitoring

Monitoring of the environmental performance of the project will be undertaken on-site at the implementation level. Regular site inspections (weekly and monthly) will be undertaken on-site. In addition, a review of the environmental project performance should be part of the quarterly project assurance process. Regular site inspections will be undertaken to ensure that appropriate measures are implemented on-site to control and mitigate the potential environmental impacts of activities. This will allow UNOPS to evaluate standards compliance, assess performance trends and establish necessary actions.

Regular site inspections shall also identify the good environmental practices that can be shared across the business to improve environmental performance in other projects. Site inspections shall be undertaken by designated personnel on-site, including: the SHEQ Task Force, HSE Site Coordinator, HSE Coordinator or HSE Manager. The review of the project's environmental performance should be undertaken by the PM as part of the quarterly assurance process.

Considerations ⁷

Through regular monitoring, each project should provide the following information monthly:

- a summary of environmental near-misses and non-conformances. This includes the category, description of situation (including photos if possible), description of remedial action, date (when non-conformance occurred, when it was closed);
- a summary of incidents of pollution. This includes a description of the incident (including photos if possible), a description of remedial and preventative actions and dates (when non-conformance occurred, when it was closed);
- a record of the number of toolbox talks, including topics;
- a record of the number of complaints, including details, the date of complain, details of the actions undertaken; and
- miscellaneous information, such as project-specific Key Performance Indicators (KPIs), external audits or inspections.

Inspections

Inspections are important for checking that workplaces are operating in line with the EMS system. If no one checks, employees and contractors are less likely to feel compelled to put effort into ensuring that the environment is protected. Inspections should be done by the PM, engineers, site supervisors, contractor supervisors and safety officers. It is good practice to involve a shop floor team leader and/or an employee HSE representative.

⁷ It is strongly recommended that senior management visiting the site also conduct a review its environmental performance.

When doing an HSE inspection, consider the following:

- waste management and segregation;
- fuel/oil/chemical storage;
- drainage, dewatering, spillage control;
- ecology, archaeology and heritage;
- dust and mud;
- odour and air emissions;
- noise and vibration; and
- community interface.

When conducting the HSE inspection, the authority should also consider the following Health and Safety concerns:

- general and welfare (including housekeeping);
- emergency arrangements & response (fire, first aid, MOSS);
- work at height;
- equipment/portable tools/electrical appliances;
- excavation;
- PPE;
- underground and overhead services;
- hazardous materials;
- traffic management;
- Risk Assessment and Method Statement (RAMS); and
- lifting appliances and equipment.

Form HS17 is designed to help someone to conduct an inspection. The form allows the inspector to record the number of issues noted under each category. A description of each issue observed should be included and it is recommended to include or attach pictures to make the issues clear.

In order to ensure that the issues raised are corrected it is important to assign responsibility for the action required. A categorisation of the priority or urgency of the issues should be indicated on Form HS17. Depending on the urgency, the priority may be set as: immediately; within 24 hours, within three days; or, if more than 3 days are needed, the authority should specify time required. The guidance notes on Form HS17 helps the inspector to know what to look for.

14. Legal and other requirements

Refer to the UNOPS Health and Safety manual section 16, to see how UNOPS handles legal requirements for Health, Safety and Environment.

15. Environmental Management System (EMS) Audit

An internal audit of the EMS will be undertaken on an annual basis. The purpose of the audit is to ensure that the EMS is in line with the ISO 14 001 standard and also that the EMS is being appropriately implemented and maintained. The internal audits also help to check whether the EMS is performing in line with the environmental Policy and objectives. Internal audits will be carried out through peer-review by PMs, designated internal auditors or by the HSE Manager.

Audit Programme

An audit programme shall be prepared. The programme shall take into account major environmental impacts and the results of previous audits. The results of audits will be communicated to senior management through the Management review process. In order to guide internal auditors the HSE audit template may be used.

Responsibility for Internal Audits

The HSE Manager is responsible for preparing the internal audit process and for coordinating internal audits. The HSE manager shall maintain records of internal audits. The sites where the audits are done shall also maintain records of the audit.

Method and Frequency of audits

Internal audits for a site shall be held at least once per year. They shall be carried out by doing a review of the system documentation of the site being audited and verifying compliance to the EMS. There is need to ensure an objective and impartial assessment. This shall be considered when selecting the internal auditors to use and also when conducting the audit.

Considerations

The scope of the audit covers:

- the definition of the scope of the EMS;
- policy;
- environmental aspects and compliance with the legislation and other requirements;
- system objectives and targets - execution of the EMS action plan;
- the EMS structure;
- training;
- communication and reporting arrangements;
- operation control;
- project compliance evaluation reviews; and
- emergency response and preparedness.

16. Environmental Management System (EMS) Review

The management review will be undertaken on an annual basis. The purpose of the management review is to ensure that UNOPS environmental management is appropriate and effective in controlling for environmental risks and delivering environmental performance improvements. The review shall be arranged by the HSE Manager and attended a selected group of senior managers.

Considerations

The Management review shall cover the following:

- review of the actions taken following the previous management review;
- review of the EMS policy for accuracy and adequacy;
- Changes to objectives and targets;
- review of the EMS performance
- Whether objectives and targets were met;
- review of compliance with legislation;
- review of the findings of the internal and external audits, including relevant action plans' implementation;
- Issues arising from consultations (internal and external), stakeholder communications, complaints raised including claims
- Corrective and preventative actions from incidents and other issues;
- Changing circumstances that have an impact on the programme
- Recommendations for improvements

A record of the meeting shall be maintained and feedback on the system performance shall be provided to the Executive Director.

17. Project closure

A final review of the environmental performance of the project should be undertaken and clearly recorded in the PEMP. The final review should take place during the project's closing stage. The final review of the project environmental performance allows stakeholders to:

- evaluate the project's performance against objectives and targets set-out in the initiation phase;
- evaluate the project's compliance with the relevant environmental legislation;
- ensure that the Donor/Beneficiary requirements, in terms of the environmental performance of the project, have been addressed;
- ensure that all environmental impacts of the project have been addressed;
- identify good environmental practices that can be shared across the organisation; and
- identify any lessons learnt that can help to improve the overall environmental performance of UNOPS projects.

The PM is responsible for undertaking final review of the PEMP.

Considerations

The final review of the environmental performance of the project should ensure that all actions identified in the PEMP – those that mitigate the negative impacts and enhance positive effects of the project – are fully addressed and closed out. If any of the identified actions has not been completed, the review should clearly state the reason for not addressing the respective environmental impact as planned. The review should also include information on the compliance with the environmental legislation, i.e. indicate whether project execution lead to any incidence of a breach of legislation (pollution incidents) or public complaints.

The fully closed-out PEMP can be used as the reporting tool to provide the Donor/Beneficiary with feedback on the project environmental performance, as necessary.

18. Nonconformities, corrective actions and preventative actions

This section deals with actual and potential non-conformances and both corrective and preventative actions.

Identification and investigation of non-conformances

Non-conformances shall be identified from inspections, incident investigations and audits. Where necessary an investigation shall be carried out to determine the cause of non-conformances. The need for corrective actions shall be evaluated and where actions are required they shall be put in place to ensure that environmental consequences do not result from the non-conformances.

Corrective actions should be followed up and closed out to ensure that recurrences of the non-conformances are avoided.

Recording, communication and reviewing effectiveness of actions

Corrective actions and preventative actions shall be recorded on inspection forms, investigation reports and audit corrective action plans. For major incidents form HS 22 shall be used to communicate the incident including the results of action plans. Periodically, effectiveness of previous corrective and preventative actions should be reviewed to ensure that the actions are appropriate and fit for purpose.

If it is discovered, whilst establishing corrective and preventative actions, that environmental aspects have changed or new hazards have been introduced then the proposed actions shall be risk assessed before implementation.

19. Training

Training shall be carried out in order to raise awareness for the requirements of the EMS and to ensure that personnel who have an impact on the environment are competent. In determining competence the organisation will consider appropriate qualifications, experience and relevant training. Records for demonstrating such competence shall be maintained. Training shall be targeted at different levels in order to ensure that personnel fulfil their EMS functions. Project managers and project engineers will get EMS training which includes use of the different tools under the EMS. Shop floor employees (including contractor employees) should get training through tool box talks and any other awareness activities. Training records shall be maintained as part of the HS plan and supporting documents.

Training Needs

Training needs shall be determined and used to plan training. Training needs should be related to major environmental impacts. A process will be implemented to test the effectiveness of training and records should be maintained.

Employees shall also be made aware of their roles and responsibilities for HS. This includes awareness of what they should do in emergencies.

EMS Awareness

UNOPS operations shall ensure that people working under UNOPS control are aware the environmental implications of their work and behaviour including benefits that result with improved individual performance. In addition, personnel should also be made aware of possible consequences of not following procedures.

When carrying out training UNOPS shall address language, literacy levels, risk exposure and level of responsibility of the audience in order to make the training appropriate.

Ways of carrying out Environmental training

EMS training shall be offered by SIPG, the Infrastructure department of UNOPS. Training may also be through online courses from external service providers. Toolbox talks shall be used to create awareness among employees. In addition, some coaching and awareness creation shall be offered informally during inspections. In line with UNOPS values of developing National capacity, opportunities shall be sought to assist the Environmental skills of local contractors and local personnel.

20. Communication

Ways of communicating EMS related matters

Communication within the organization shall include email communication across and within the different levels, communication through the Infrastructure community of practice forum, communication through meetings held by different operations. These same communication channels shall be used among UNOPS personnel and with contractors and partners. The UNOPS intranet shall be used to communicate to internal personnel. External communication shall be done globally through the UNOPS website. At a local project level communication shall include the holding of meetings and exchange of documents with contractors and other stakeholders. Records of external communication shall be kept for future reference.

Organisation-wide EMS directives and instructions shall be issued through email to all UNOPS personnel on email. Project managers shall communicate the relevant requirements to contractors and ensure that the contractors comply with the requirements of the EMS system. For projects, project-specific EMS requirements shall be communicated through the program manager and project manager who shall then communicate to project engineers and other site personnel.

Induction

Induction trainings shall be part of trainings that impart awareness of relevant environmental information and controls.

Communications from external parties

Communication received from external interested parties shall be received and kept on file. The project manager is responsible for responding to external parties. The project manager may escalate issues raised by the external communications to higher levels in the organisation.

21. Emergency preparedness and response

UNOPS sites shall identify the possible emergencies and put in place plans for responding to emergencies. Response to emergency situation shall ensure mitigation of adverse environmental impacts. Planning for emergency response shall include consideration of any relevant stakeholders including the surrounding community or neighbours and emergency services.

Emergency procedures shall be tested through appropriate drills and, where possible, may involve relevant interested parties. Emergency procedures should be periodically reviewed to ensure continued relevance. It is important to consider possible improvements after drills and after actual emergency situations. Emergency planning may include use of the following forms:

- Emergency and evacuation procedure form HS02
- Project emergency contact numbers HS03

Drill records HS04

22. Control of Documentation and records

UNOPS EMS Documents

UNOPS EMS documents consist of EMS handbook, EMS policy, Objectives, targets, plan, procedures, templates, guidelines and toolbox talks. These documents cover the various elements of the EMS management system and enable the UNOPS EMS system to meet the requirements of the ISO 14 001 standards.

UNOPS EMS Records

Records are all the documents that are filled-in or generated to show results or to show that activities have been done. Examples of records include weekly inspection reports, Environmental Management Plans, monthly summary of performance and investigation reports.

Documenting the EMS System

The UNOPS EMS system shall be formally documented to allow for control and accountability. The thrust of documentation shall be to ensure that the requirements of the EMS system are met, that there is control over environmental impacts and that continuous improvement is encouraged.

There should be adequate and efficient planning and implementation without producing more documents than necessary.

Approval of Documents

The official documents of the EMS System shall be compiled into a hardcopy manual and shall be approved for use by the HSE Manager. The document shall be authorised by the Director SIPG. The signed copy (or a scan of it) shall be kept on file. EMS documents of the same version as in the authorised manual shall be made available to EMS users through the UNOPS intranet system.

Review of Documents

There shall be an annual review of the EMS system documents in order to update the system with the changes and improvements that will have been suggested through the year. Review of the EMS policy should be after two years because of the amount of consultations and processes required before UNOPS can change an Organisational Directive. Ideally, review of EMS documents should be after the audits and management review so that suggestions from these activities may be incorporated.

The Version of the documents shall be indicated on the document. After the first revision, the documents will show date for next revision date. There will also be an indication of what changes have been made in producing the latest version. The use of obsolete documents shall be prevented. Any obsolete documents which are kept shall be clearly marked.

The latest version of the documents shall be available for use on the UNOPS intranet. All users are required to keep the documents legible and readily identifiable. Any documents originating from outside UNOPS sources but required for the EMS shall be identified and their distribution controlled.

Control of records

Records shall be maintained in order to demonstrate that the requirements of the EMS system have been made. The records shall be legible and traceable. The records should properly be labelled so that they can be easily identified. Records shall be stored in such a way that they are accessible to those who need to use them. The records should not be privately stored by individuals to avoid loss of records when individuals leave particular duty stations. The records (soft or hardcopy) shall be stored in such a way that they are protected from damage or destruction. Records shall not be destroyed. The HSE Manager shall be consulted if it becomes necessary to dispose of HSE records.

23. Evaluation for compliance

UNOPS operations shall evaluate compliance with legal and other requirements at least once a year. This shall be done by verifying whether legal requirements have been met using form HS 27.

Where requirements have not been met, corrective actions should be put in place to immediately remedy the situation. A copy of this completed record should be shared with the HSE Manager.

24. EMS for office facilities

Infrastructure operations have their impacts at construction sites. However, UNOPS personnel who supervise and control these operations usually have an office, away from the construction sites, where they are based. Therefore, the environmental management system shall cover these UNOPS offices. The environmental management system shall also cover the operations of SIPG at UN City. A template for producing office environmental management plans is available under the UNOPS EMS templates. The other EMS templates such as screening, environmental review and EMPs should be used to complete the office EMS.

25. Contractor management

Contractors engaged by UNOPS shall comply with the requirements of the HSE system for the work performed under the contract with UNOPS. Therefore, contractors will be made aware of the HSE requirements and requirements of the site HSE plan. It is recognised that contractor capacity and skills are generally lower than the desirable levels in the locations that UNOPS works. Therefore, UNOPS teams may be required to develop the capacity of contractors by assisting the contractors to plan and to carry out their work in a way that meets the requirements for HSE.

26. Copies of templates, guidelines and tool box talks

The latest copies of templates, guidelines and toolbox talks are found on the intranet. The HSE webpages on the intranet also contains additional information about HSE and announcements.



United Nations Office for Project Services (UNOPS)
Sustainable Infrastructure Practice Group (SIPG)

Marmorvej 51, PO Box 2695
2100 Copenhagen, Denmark
Tel: +45 4533 5000
Infrastructure@unops.org