

# **ADDITIONAL FINANCING OF ESSENTIAL HEALTH SERVICES ACCESS PROJECT**

## **ENVIRONMENTAL MANAGEMENT PLAN**

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Ministry of Health and Sports

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# Presentation Outline

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  - During Operational Phase
- Mitigation Measures
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- Environmental Management
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  - Training and Capacity Building
  - Budget

# Potential Environmental Risks and Impacts

1

## Due to construction and renovation activities (1)

- The project will finance construction, renovation and refurbishing of health facilities at the township level and below, e.g., township hospital, station hospital, rural health center, sub rural health center.
- Without proper design, basic environmental hygiene facilities (hand washing facilities, toilets and waste disposal facility) may be neglected.
- The construction and renovation activities may generate limited adverse environmental impacts such as dust, noise, vibration, waste, solid waste and safety issues.
- Also, there could be isolated health risks associated with exposure to asbestos containing materials in the case of old facilities that are using asbestos roofs.

# Potential Environmental Risks and Impacts

2

## Due to construction and renovation activities (2)

- Also, there could be isolated health risks associated with exposure to asbestos containing materials in the case of old facilities that are using asbestos roofs.
- Additionally, in the case of building renovation activities including changes of internal layout (e.g., walls), there is a potential risk on the structure and safety of the existing buildings.
- These impacts are assessed to be of small scale, localized, in short-term period and manageable if good design and construction practices are followed.
- In this project, specific Environmental Code of Practices (ECOPs) will be followed to avoid any possible impacts during such civil works. The health facility staff or those who will carry out these works will be responsible to implement these ECOPs.

# Potential Environmental Risks and Impacts

3

## During operational phase (1)

- The project will improve the capacity of healthcare providers at the local level and provide them with basic health items and medical instruments (e.g., syringe, needles, and drugs). Therefore, healthcare waste and relevant wastewater will be increased slightly.
- Majority of healthcare waste is general waste, which is similar to household waste.
- Only 10-25% of solid healthcare waste is regarded as “hazardous waste” including sharps waste, infectious waste, pathological waste, pharmaceutical waste, cytotoxic waste, chemical waste, radioactive waste.
- At primary healthcare settings, hazardous healthcare wastes are mainly sharps, infectious wastes, anatomical waste (placenta) and small amount of pharmaceutical waste.

# Potential Environmental Risks and Impacts

4

## During operational phase (2)

- Pathogens in infectious waste and wastewater may enter the human body by a number of routes: through a puncture, abrasion, or cut in the skin; through the mucous membranes; by inhalation; by ingestion.
- Sharps represent a double risk. They may not only cause physical injury but also infect these wounds if they are contaminated with pathogens. There is concern about infection with human immunodeficiency virus (HIV) and hepatitis viruses B and C, for which there is strong evidence of transmission from injury by syringe needles contaminated by human blood.
- Additionally, the general public is very sensitive about the visual impact of anatomical waste, that are recognizable human body parts including placenta.
- All individuals exposed to hazardous health-care waste are potentially at risk, including those within health-care establishments and those outside these sources.

# Potential Environmental Risks and Impacts

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## During operational phase (3)

- The main groups at risk are the following: health staff, patients, patient relatives and visitors, workers in waste disposal facilities including scavengers.
- However, amount of healthcare waste generated from a health center is expected to be small.
- If segregated correctly, generation of hazardous healthcare waste is 0.1 kg/bed/day at health centre and 0.12 kg/bed/day at district hospital .
- Wastewater from health centre has insignificant weight approximately 1m<sup>3</sup> per day and has the same basic component as the domestic wastewater.
- Given the small amount of healthcare waste and wastewater from primary healthcare facilities, potential impacts on the environment are deemed to be minor, site specific, and for which mitigation measures can be readily designed.

# Mitigation Measures

1

## Measures to mitigate impacts due to construction and renovation activities

- Prior to the construction/renovation execution, the design of healthcare facility should be reviewed and approved by local competent agencies.
- Basic environmental hygiene facilities such as hand washing facilities in the **general examination room** and **post** delivery room, external toilets with hand washing facilities, and waste disposal facility (placenta pit) shall be included in the facility design.
- During civil works, the healthcare facility staff or contractor shall be responsible for following the Environmental Code of Practices (ECOPs) to mitigate environmental impacts (see Table 1 for details in the document).

# Mitigation Measures

## Environmental Code of Practices (ECOPs)

Environmental issue	Mitigation measures
Dust, noise and vibration generated from construction, rehabilitation or minor civil works	<ul style="list-style-type: none"> <li>- The HCF staff or the contractor(s) is responsible for compliance with relevant national legislation with respect to ambient air quality, noise and vibration</li> <li>- The HCF Staff and the contractor(s) undertaking works shall ensure that the generation of dust is minimized and implement a dust control plan to maintain a safe working environment and minimize disturbances for patients, staff and surrounding community</li> <li>- The HCF Staff and the contractor(s) undertaking works shall implement dust suppression measures (e.g. water paths, covering of material stockpiles, etc.) as required. Materials used shall be covered and secured properly during transportation to prevent scattering of soil, sand, materials, or generating dust. Exposed soil and material stockpiles shall be protected against wind erosion</li> <li>- The HCF Staff or the contractor(s) shall ensure onsite latrine be properly operated and maintained to collect and dispose waste water from those who do the works</li> <li>- The HCF Staff or the contractor(s) should not carry out construction activities generating high level of noise during HCF activities, especially when services are being delivered to the clients.</li> </ul>
Solid waste generated from rehabilitation or minor civil	<ul style="list-style-type: none"> <li>- The HCF Staff or the contractor(s) shall develop and follow a brief site-specific solid waste control procedure (storage, provision of bins, site clean-up, bin clean-out schedule, etc.) before commencement of any financed rehabilitation works;</li> <li>- The HCF Staff or the contractor(s) shall use litter bins, containers and waste collection facilities at all places during works.</li> <li>- The HCF Staff or the contractor(s) may store solid waste temporarily on site in a designated place prior to off-site transportation and disposal through a licensed waste collector</li> <li>- The HCF Staff or the contractor(s) shall dispose of waste at designated place identified and approved by HCF management or local authority. Open burning or burial of solid waste at the HCF premises shall not be allowed. It is prohibited for the HCF Staff or the contractor(s) to dispose of any debris or construction material/paint in environmentally sensitive areas (including watercourse)</li> <li>- Recyclable materials such as wooden plates for trench works, steel scaffolding material, site holding, packaging material, etc shall be segregated and collected on-site from other waste sources for reuse or recycle (sale).</li> </ul>

Environmental issue	Mitigation measures
Asbestos containing materials (ACM) generated from renovation or minor civil works	<ul style="list-style-type: none"> <li>- Safe removal of any asbestos -containing materials or other toxic substances shall be performed and disposed of by specially trained workers in line with the WBG guidelines on asbestos management (Annex 8.10). Because specific regulation has not yet been developed in Myanmar, International occupational health and safety guidelines will be applied during removal of ACM from HCF undergoing Renovation.</li> <li>- If ACM at a given HCF is to be removed or repaired, the PMU will stipulate required removal and repair procedures in the contractor's contract.</li> <li>- Contractors will remove or repair ACM strictly in accordance with their contract. Removal personnel will have proper training prior to removal or repair of ACM.</li> <li>- All asbestos waste and products containing asbestos is to be buried at an appropriate landfill and not to be tampered or broken down to ensure no fibers are airborne.</li> <li>- No ACM will be used for renovation works.</li> </ul>
Safety risks during works, health staff, patients and their relatives	<ul style="list-style-type: none"> <li>- The HCF Staff or the contractor(s) shall comply with all national and good practice regulations regarding workers' safety.</li> <li>- The HCF Staff or the contractor(s) shall prepare and implement a simple action plan to cope with risk and emergency (e.g., fire, earthquake, floods)</li> <li>- The HCF Staff or the contractor(s) shall have or receive minimum required training on occupational safety regulations and use of personal protective equipment</li> <li>- The HCF Staff or the contractor(s) shall provide safety measures as appropriate during works such as installation of fences, use of restricted access zones, warning signs, lighting system to protect hospital/HCF staff and patients against falling debris and other risks.</li> </ul>

# Mitigation Measures

3

## Measures to mitigate impacts from healthcare waste

- Under the ongoing project, healthcare waste management guidelines, Standard Operating Procedures (SOPs) and training modules have been prepared by MOHS to provide guidance for managing waste generated from healthcare activities.
- The guideline is directed towards health facility staff, administrators, regulatory agencies, hospital service organizations, consulting firms and environmental compliance personnel.
- The training modules are directed towards managerial level health professionals and operational level health professionals, distinguished into knowledge-based and skill-based training modules.
- Health facility shall apply a facility-specific healthcare waste management plan per MOHS guidance including standardized operating procedures, which reflects mainly good practice methods on how to properly manage and contain solid healthcare waste generated during common activities in the facilities (table 2 of the document).

# Mitigation Measures: Healthcare Waste Management Guidelines

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## Solid healthcare waste, especially sharps and infectious waste generated from healthcare activities

- Health facilities will apply standard operating procedures of solid healthcare waste including: minimization, segregation, storage, transport, treatment and final disposal of solid healthcare waste.
  - Waste Minimization
  - Labelling
  - Storage of Healthcare Waste
  - Transportation of Healthcare Waste
  - Central storage facility for Healthcare Waste
  - Treatment of Healthcare Waste
  - Disposal of Healthcare Waste

## Wastewater generated from healthcare facilities

- Waste water from health facilities should be disposed according to the reference of safe management of waste from healthcare activities developed by World Health Organization (WHO).

# Environmental Management

1

## Institutional Arrangements – Roles and Responsibilities

- The MOHS teams at the primary health facilities will ensure that health care waste generated from healthcare activities will be properly managed through the adoption of the healthcare waste management guidelines.
  - Health facilities are encouraged to apply non-burn technologies for treatment and disposal of sharps and infectious waste.
  - No new small-scale incinerators will be financed by the project. Existing incinerators will be properly maintained to ensure that medical waste is treated and disposed of according to the guidelines, and surrounding communities/residents will not be disturbed from smell and smoke.
- Health facilities having construction and renovation works will follow the basic design of health centers and/or hospitals and ECOPs described in Table 1.
- MOHS will ensure that civil works contracts contain a clause on good environmental practice and proper housekeeping measures, including adherence by contractors to the use of asbestos-free construction materials.

# Environmental Management

2

## Institutional Arrangements – Roles and Responsibilities

- Health facilities should apply facility-specific SOPs for healthcare waste management of the MOHS to ensure safe management of hazardous wastes which are generated by health care facilities.
- All health facilities should have special infrastructures and necessary equipment and consumables for healthcare waste management.
- For government health facilities, department concerned should draw a budget line to ensure separate allotment for expenses of proper healthcare waste management. A complete infrastructure and a strong financial mechanism should be developed to ensure sustainability of effective and proper healthcare waste management for each health facility.
- Health facility should establish healthcare waste management committee or team.
- All health care providers and workers of health facilities should attend the prescribed healthcare waste management training courses. Training curriculum on healthcare waste management has been developed under Essential Health Services Access Project (EHSAP) and will be used in the Additional Financing.

# Environmental Management

3

## Institutional Arrangements – Roles and Responsibilities

- The third party firm with the support of MOHS staff from Construction and Occupational and Environmental Health Units under the guidance of the DG (DPH and DMS) at union level and TMOs at township level will coordinate activities to ensure that the project investments comply with national environmental management requirements and the Bank's safeguard policies, including provisions of this EMP.
- Responsibilities of the third party firm, the Construction, Occupational and Environmental Health Staff of DPH and DMS and TMOs will include, but are not limited to the following tasks:
  - Supervise safeguard implementation by health facilities (with help of technical consultants);
  - Manage safeguards training plan to health facilities and relevant staff involved in safeguards implementation;
  - Ensure adequate budget (operation costs) for relevant costs affiliated with compliance with EMP provisions and overall environmental safeguards implementation.
- The World Bank project team will provide guidance and technical assistance to the third party firm, the Construction Section, Occupational and Environmental Health Section , DPH, DMS and relevant TMOs on project implementation including safeguard execution.

# Environmental Management

4

## Monitoring and Reporting

- During implementation of civil works - new construction, renovation and refurbishing activities, the healthcare facilities and local (township/village tract/village) health committees will be responsible for day to day supervision on implementation of mitigation measures as specified in the ECOPs.
- They will be guided in this task by contracted third party firm, designated Construction Staff and Occupational and Environmental Health Staff of DPH and DMS and technical consultants hired by the project with the primary role to enhance safeguards capacity and environmental management during the entire period of project implementation.
- The participating health facilities shall include, if necessary, the safeguard implementation to DG (DPH and DMS) and TMOs as part of their progress reports.

# Environmental Management

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## Monitoring and Reporting

- The health committees, Construction Staff and Occupational and Environmental Health Staff under DG (DPH and DMS) and TMOs are responsible for supervising the implementation of healthcare waste management plans by the health facilities (refer to checklist in Annex 6 of the document).
- This Checklist is a general tool designed for observation and review of records in the assessment of healthcare waste management. If necessary, it could be revised during implementation to reflect any additional aspects relevant to each facility.
- Local communities are encouraged to undertake monitoring and provide feedbacks through existing community mechanisms which will be strengthened as part of the project.
- If there are complaints from local project-affected groups, the Project Steering Committee at union level, respective state/region health departments and the health facilities should assess in a timely manner the validity of complaints and take any necessary actions to remedy the situation.

# Environmental Management

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## Monitoring and Reporting

- Construction and Occupational and Environmental Health Staff at union level and Project Steering Committee are responsible to provide technical guidance as needed to the third party firm, State and Regional Health Directors, TMOs/SMOs and health facilities to enable them in fulfilling their supervision responsibilities and related reporting and documentation requirements.
- Consequently, DG ( DPH and DMS) and Project Steering Committee is responsible to ensure that the project supports specialists (national or international) that have relevant technical skills on healthcare waste management and safeguards implementation in order to provide adequate guidance and training as necessary to local health facility staff and others involved in project safeguards implementation.
- The Construction Section (DPH and DMS) has been using the construction supervision checklist and completion checklist to manage construction of health facilities. These checklists should be supplemented with additional criteria associated to environment, health and safety.

# Environmental Management

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## Training and Capacity Building

- Solid healthcare waste and Occupational Health and Safety training program has been developed under the EHSAP and provided to healthcare providers at some of the health facilities on aspects linked to Medical Waste Management and Occupational health and Safety.
- Consultants with knowledge of environmental safeguard implementation (e.g., ECoPs and EMP provisions) will be hired to provide implementation support and monitor compliance with safeguard instruments.
- The project will also hire consultant(s) with health care waste management skills that will provide guidance and training to Construction, Occupation and Environmental Health Staff at DPH and DMS (central level), State/Region Health Department staff, TMOs/SMOs, and health facility staff on health care waste management. Further, a Training of Trainers (ToT) program will be developed under the additional financing project to reach all primary stakeholders involved in health facilities financed by the project.
- Project component on systems strengthening would finance activities related to capacity building for health care waste management, targeting strengthening of related procedures and regulations, skills of staff, and providing initial supplies to allow proper implementation of procedures in facilities.

# Environmental Management

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## Budget

- The cost for safeguard implementation is estimated as part of project's overall costs by the union Construction Section and Occupational and Environmental Health Section at the union level.
- Overall annual operations cost (e.g., sludge management, waste disposal, transportation, maintenance and replacement, etc.) should be factored in and estimated by beneficiary health facilities when they prepare the annual township investment plan for their facilities.