Environmental Assessment and Review Framework

November 2015

MYA: Economic Empowerment of the Poor and Women in the East-West Economic Corridor

Prepared by The Ministry of Hotel and Tourism for the Asian Development Bank.

CURRENCY EQUIVALENTS
(as of 11 November 2015)

Currency unit	–	kyat/s (MK)
MK 1.00	=	$0.0007788161
$1.00	=	MK 1,284.000100

ABBREVIATIONS

EA	–	executing agencies
EAR	–	environmental assessment report/s
EARF	–	environmental assessment review framework
ECL	–	environmental conservation law
EIA	–	environmental impact assessment
EMP	–	environmental management plan
FIL	–	foreign investment law
GRM	–	grievance redness mechanism
IA	–	implementing agencies
MOECAF	–	ministry of environmental conservation and forestry
MOHT	–	ministry of hotels and tourism
MSE	–	micro-small enterprise
PMU	–	project management unit
SIA	–	social impact assessment
SPS	–	safeguard policy statement
VTCs	–	Vocational training centers

NOTE

(i) In this report, "$" refers to US dollars, unless otherwise stated.

ENVIRONMENTAL ASSESSMENT AND REVIEW FRAMEWORK

TABLE OF CONTENTS

1 Introduction/Overview

The Economic Empowerment of the Poor and Women in the East-West Economic Corridor is intended to support micro and small enterprises (MSE) development and increased employment and economic opportunities for the poor and women from selling crafts and local food with high market demand, for local and tourist markets. The project locations are Mawlamyine, Mudon, Kyaikhto and Chaungzon Island – four townships in Mon state. The Project outcome is micro and small enterprises enabled to increase business activities in project areas. The outcome will be achieved through four complimentary outputs namely: Output 1. Skills and management capacity of micro and small enterprises and their employees developed; Output 2. Access to business services, credit and commercial networks strengthened; Output 3. Infrastructure to support access to markets and processing facilities improved; and Output 4. Efficient project management and monitoring delivered.

1.1 Purpose of the Environmental Assessment Review Framework

The purpose of this Environmental Assessment Review Framework (EARF) is to: (i) describe the proposed activities to be financed under the *Project*; (ii) specify the requirements that will be followed in relation to project screening and categorization, environmental assessment including provisions for meaningful consultation with stakeholders and information disclosure requirements and, where applicable, safeguard and environmental criteria that are to be used in selecting subprojects and/or components; (iii) specify implementation procedures; (iv) specify monitoring and reporting requirements; and (v) describe the responsibilities of the clients and of ADB in relation to the preparation, implementation, and progress review of safeguard documents of subprojects.

Selection of activities and/or components will be in accordance with the selection criteria outlined in this EARF. The EARF shall serve as guide to ensure compliance with the environmental assessment requirements under the 2009 ADB's Safeguard Policy Statement (SPS) as well as the environmental requirements of the Government of Myanmar.

1.2 Myanmar Environmental Assessment and Review Procedures

1.2.1 National Environment Policy

The National Environment Policy was issued in 5 December 1994[1] to establish sound environment policies, utilization of water, land, forests, mineral, marine resources and other natural resources in order to conserve the environment and prevent its degradation. The objective of Myanmar's environmental policy is aimed at achieving harmony and balance through the integration of environmental considerations into the development process to enhance the quality of the life of all its citizens.

The development of the environmental policy was followed by the drafting of "Myanmar Agenda 21" in 1997, which follows a UN framework for a multi-pronged approach to sustainable development. Myanmar Agenda 21 calls for integrated management of natural resources and provides a blueprint for achieving sustainable development and recognizes the need for environmental impact assessment (EIA).

1 Proclaimed through a gazette in accordance with Notification No.26/94

1.2.2 Environmental provisions in the 2008 Constitution

Under the 2008 Constitution, the government "shall protect and conserve the natural environment" (Chapter 1, Section 45). The national legislature can, but does not need to, enact laws to protect the environment and help restore areas degraded or damaged by mining and forestry activities or those that have experienced destruction of plants, wildlife, and habitat (Chapter 4, Section 96). State and Division Legislatures also have the power to regulate environmental protection, but within the boundaries of legislation passed by the National Legislature (Chapter 4, Section 196). In addition, every citizen has the duty to "assist" the government in carrying out environmental conservation (Chapter 8, Section 390).

1.2.3 National law on environmental management

The Pyidaungsu Hluttaw Law No. 9/2012, also known as the Environmental Conservation Law (ECL), was enacted in 30 March 2012 to facilitate (i) implementation of the country's National Environmental Policy, (ii) systematic integration of environmental conservation in the sustainable development process, (iii) healthy and clean environment and conservation of natural and cultural heritage, (iv) reclamation of degenerated and disappearing ecosystems, (v) management of natural resources for sustainable use, (vi) public awareness, (vii) international, regional and bilateral cooperation, and (viii) collaboration within different government departments and organizations, and with non-government organizations, and other stakeholders. The implementing rules are yet to be issued.

The Conservation of Water Resources and River Law of 2006 prohibits pollution of water resources and specify penalties. This law is primarily concerned with river transportation and the regulation of river fishing and sewage discharge. It authorizes the Directorate of Water Resources and Improvement of River Systems to determine dangerous water levels for towns; cooperate with relevant government departments and organizations to solve related problems; and guide the use river water for domestic and agricultural use. The law: prohibits water pollution; prescribes terms and conditions for the monitoring and prevention of water pollution; and specifies penalties for those who pollute water.

The 1994 Protection of Wildlife and Natural Areas Conservation Law also specifies penalties for water pollution.

A number of laws and policies concern the management of urban water resources. The Canal Act (1905, last amended in 1998) regulates the allocation of water for public purposes, water supply and drainage works. The Act permits all water in all rivers and streams flowing in natural channels as well as lakes and other national still water bodies to be used and controlled for public purposes. The Myanmar Embankment Act (1909, last amended in 1998) requires every owner or occupier of immovable property in the vicinity of an embankment to help maintain the embankment or to provide a laborer who can. The Act authorizes an embankment officer to enter into any immovable property in the vicinity of an embankment and take possession of, appropriate or remove and use any relevant materials for the purpose of such work.

The Underground Water Act (1930) deals with the conservation and protection of underground sources of water supply in Myanmar.

1.2.4 Requirement for foreign investments

The Myanmar Foreign Investment Law (FIL) specifies major development projects that require EIA and social impact assessment (SIA). However the FIL list does not include municipal infrastructures such as water supply systems (treatment and distribution), sewerage systems (collection, conveyance and treatment), and solid waste management (compost plants, landfills and incinerators)[2] therefore (i) no procedures for requiring assessment of environmental effects of such projects, and (ii) setting environmental conditions to protect the environment and people. This means that for potential municipal infrastructure projects, government is unable to assess whether an activity will have a significant effect on the environment and even if assessments are carried out, government will have limited legal ability to place conditions on the impact the project/activity can have on the environment.

Currently, ADB is assisting Myanmar to strengthen its EIA capability through *TA 7566-REG: Strengthening and Use of Country Safeguards Systems* (Capacity Building for Implementing Environment and Social Safeguards in Myanmar).

1.3 Implementation Arrangement

The responsible agency will be the executing agency, the Ministry of Hotels and Tourism (MOHT) which will house the Project Management Unit (PMU) with responsibility for overall planning and coordination of implementation, including programming, budgeting, financial planning, accounting and reporting. The EA is responsible for the compliance with the environmental safeguard measures set out in this EARF.

The PMU will receive overall direction and policy guidance from a Project Steering Committee (NSC). The NSC will meet every 6 months after grant effectiveness or more frequently as needed.

At the local level, the implementing agency will be the Office of the Chief Minister of Mon State.

On environmental safeguards, the Ministry of Environmental Conservation and Forestry (MOECAF) is the focal and coordinating agency for the overall environmental management while the Environmental Conservation Department (ECD) is the agency in-charge of implementation. Under the ECL, MOECAF has a broad responsibility of (i) planning the national and regional level environmental management, (ii) implementing and monitoring environmental conservation and promotion, (iii) preventing, controlling, and reducing environmental pollution; and (iv) paving the way for sustainable development.

There is limited experience and technical capability within MOHT on environmental protection and sustainable development, particularly with regard to ADB's safeguards requirements. This gap will be addressed by project consultant team expertise and support.

2 Construction of housing estates, apartment and condominium buildings, bridges, golf courses and other leisure facilities, highways, and railroads require a joint venture with local investors. Construction of office and commercial buildings, in addition, requires an approved Conservation Management Plan and should be operated as joint venture under a build-operate-transfer (BOT) system. Building designs and architectural plans must follow the standard of mutual recognition arrangements, national building codes and other rules and regulations issued by the Ministry of Construction.

2 Overview of Type of (sub) Projects to be Assessed and Anticipated Environmental Impacts

The project has four (4) outputs:

Output 1. Skills and management capacity of MSEs and their employees developed. The project will target 12 poor villages with approx. 900 households in Kyaiktho and Mawlamyine. This output will: (i) conduct value chain analysis that will be used in the final selection of crafts and local food to be developed;(ii) identify women producers/project recipients from existing producers and "left behind families" of migrant workers interested in developing productive businesses with the use of remittances; and (iii) conduct training needs analysis and design training programs. Training on business management, finance, market access, gender equality, safe migration and life skills, will be included as a standardized training package. Trainings will culminate in business development plans.

Output 2. Access to business services, credit and commercial networks strengthened. This output will establish (i) community producer groups; (ii) train and provide technology/ equipment to producer groups to establish and maintain local processing facilities to function as one stop service centers for procurement, processing and production; (iii) strengthen producers' access to credit through linkage with local microfinance institutions (an assessment will be undertaken of micro-credit providers and the feasibility of credit access); (iv) strengthen commercial networks between producers, suppliers/ wholesalers and retail outlets/ markets in Kayin, Mon and Yangon; and (v) implement a "made in Myanmar" marketing and promotion program. It is expected that this output will provide direct employment for the poor and women in processing facilities.

Output 3. Infrastructure to support access to markets and processing facilities improved. Output 3 will (i) explore the possibility of constructing a market facility (dry market) in Mawlamyine; (ii) upgrade candidate vocational training centers (VTCs), based on need, including VTCs in Hpa-An. The land for the market will be vacant, unused and unoccupied state owned land free of encumbrances to be identified and provided by the government. Management, operation and maintenance plans for the facilities will be drafted and adopted to ensure sustainability and financing of incremental recurrent costs.

Output 4. Capacity of EA, IA and key stakeholders enhanced. This output will (i) recruit and train project staff; (ii) establish project performance and management systems; (iii) develop and implement an exit strategy; and (v) provide technical expertise to ensure smooth project implementation, knowledge transfer and execution of the project's exit strategy. In addition, the project will build linkages with key local agencies and stakeholders.

Civil works financed under the project will be small scale; for the market the cost is estimated at $437,000, building footprint 875m^2 and the land parcel 1200m^2. For the processing center the cost is estimated at $210,000, the footprint 600m^2 and the land parcel 900m^2. The environmental impacts associated with the works will be localized, temporary and can be comfortably managed by the civil works contractor during construction. The appropriate Environmental Assessment Report and the Contractor's EMP will manage the minimum impacts during the construction phase. Depending on where the land is located – the EMP will clearly specify the impact measures that need to be undertaken. During construction the contractor will be

required to manage solid and liquid wastes associated with construction, provide traffic furniture and controls where public roadways and vehicles movements are involved and provide for public safety. Aside from solid and liquid waste management minor impact including vegetation clearance and temporary drainage works may be necessary. Once both facilities are operational the main environmental management issues to be managed will be collection and disposal of solid wastes, maintenance of waste water treatment facilities and maintenance of open storm water drains (which will include litter traps) before final discharge to public drainage systems. The EMP for both facilities will clearly document the environmental maintenance requirements for both sites.

3 Procedures for Environmental Assessment of Subprojects

3.1 Environmental Criteria of Subproject Selection

As a general rule, subproject activities *unlikely to have adverse and irreversible impacts* shall be prioritized. Subproject activities that will be implemented shall meet the following criteria:

- Conforms to ADB's environmental Category **C**.
- Comply with all requirements of relevant national and local laws, rules, and guidelines
- Does not involve any involuntary resettlement elements (of any scale/magnitude).
- Does not directly or indirectly affect the dignity, human rights, livelihood, or culture of any one indigenous person.
- Does not inflict damage to any physical cultural resource of local, provincial, national and/or international level.
- Must be based on the perceived needs of the residents, community leaders and committees in the areas of sanitation, drainage, access, solid waste management and other potential environmental improvements that may be identified through participatory planning.

3.2 Screening and Categorization

As soon as sufficient information is available, PMU will prepare a *Simplified Environmental Management Matrix* for subproject activities to manage environmental impacts especially during construction.

3.3 Scoping and Preparation for Environmental Assessment

Prior to conducting the environmental assessment, the PMU will obtain confirmation of environmental safeguard requirement from the ADB and possibly other specific requirements for the environmental assessment, such as monitoring tasks, scope of public consultation.

3.4 Preparation of Environmental Reports

Appropriate Environmental Assessment Report/s (EAR) and EMP/s based on the Guidelines for Small Civil Works attached as *Annex A* will be prepared by the PMU and/or implementation consultants. The format shall be in accordance with Myanmar and ADB standards and formats.

In the preparation of EAR, relevant primary data will be generated and secondary data will be collected. An assessment of project impacts and risks on biodiversity and natural resources will also be undertaken. Issues regarding natural and critical habitats will be covered in the EAR. Pollution prevention for conservation of resources particularly technology for management of process wastes will be addressed in the EAR. Occupational health safety and community health safety will be properly addressed in the EMP section of the EAR. Climate change and natural hazard impacts on the project (especially in the design of components/activities) shall be considered and integrated. In case subprojects are likely to have adverse impacts on physical cultural resources, appropriate mitigation measures will to be planned and reflected in the EAR. The document will also reflect meaningful consultation and disclosure process with a provision of grievance redress mechanism.

The EMP, which is developed as part of the EAR, describes the environmental management measures that will be carried out to mitigate negative impacts or enhance the environment during implementation, and the environmental monitoring to be conducted to ensure that mitigation is provided and is effective in reducing impacts, or to determine the long-term impacts of a subproject. EMPs will outline specific mitigation measures, environmental monitoring requirements, and related institutional arrangements, including budget requirements for implementation. Where impacts and risks cannot be avoided or prevented, mitigation measures and actions will be identified so that the project is designed, constructed, and operated in compliance with applicable laws and regulations and meets the requirements specified in this document. The level of detail and complexity of the environmental planning documents and the priority of the identified measures and actions will be commensurate with the project's impacts and risks. Key considerations include mitigation of potential adverse impacts to the level of "no significant harm to third parties," the polluter pays principle, the precautionary approach, and adaptive management.

If some residual impacts are likely to remain significant after mitigation, the EMP will also include appropriate compensatory measures (offset) that aim to ensure that the project does not cause significant net degradation to the environment. Such measures may relate, for instance, to conservation of habitat and biodiversity, preservation of ambient conditions, and greenhouse gas emissions. Monetary compensation in lieu of offset is acceptable in exceptional circumstances, provided that the compensation is used to provide environmental benefits of the same nature and is commensurate with the project's residual impact.

All EARs and EMPs will be prepared prior to the award of construction contracts. The bid documents will include the requirement to incorporate necessary resources to implement the EMP. The EMP will form part of the contract document, and, if required will need to be further updated during the construction phase of a project.

3.5 Review of Environmental Assessment Reports

The PMU will be responsible for the internal review of EARs (and EMPs). The documents shall also be presented to stakeholders at provincial, district and village level for public review. The PMU will be responsible for finalizing the EAR.

The PMU shall endorse the final EARs (and EMPs) to the ADB project officer who shall arrange for the review and clearance by the relevant ADB environmental specialist.

The applicable GOM environmental permits/approval/concurrence shall be procured prior to any contract award for civil works.

3.6 Monitoring Environmental Performance

To ensure that potential environmental problems are detected and addressed appropriately, environmental monitoring will take place during implementation. During construction, the key tasks are monitoring the compliance with environmental mitigation measures in the environmental management plan, which shall be done by the PIU with oversight from the PMU.

The PIUs will conduct environmental monitoring of subprojects activities. The PIUs will conduct semi-annual environmental monitoring of all subprojects with participation from the PMU staff. A report shall be prepared and submitted to EA and PMU.

The PMU will report to ADB of the Project's performance on environmental safeguards on annual basis. For efficient implementation of the Project, the environmental reporting schedule should coincide with the overall Project progress reporting schedule. The environmental monitoring reports will be made available for disclosure on ADB's website.

ADB reviews the environmental safeguard documents including EMPs and environmental monitoring plans, on a random basis and carries out field trips to verify safeguard compliance.

4 Consultation, Information Disclosure, and Grievance Redress Mechanism

4.1 Public consultation for IEE preparation and disclosure

Meaningful stakeholder consultation and participation is part of the project preparation and implementation strategy. Public consultation will be undertaken during the EAR preparation to invite comment from the public.

During EAR preparation, meetings with groups from the target villages for the subproject will take place to inform them of the proposed subproject and the possible environmental and social impacts, and to collect opinions from people who may be affected by the project. At this stage, the following agenda should be used to ensure that there is adequate exchange of information and opinion:

a. A summary of the proposed works under the subproject;
b. A summary of subproject objectives and likely positive and negative environmental impacts, covering the construction phase and operational impacts;
c. Invitation for feedback in respect of any areas of concern that the public may have, and suggested means of implementation;
d. Disclosure of and feedback on the Grievance Redress Mechanism
e. Acceptability of the proposed works to the public; and
f. Request for information on the known occurrence of unexploded ordinance in the area where the scheme components will be built.

For the consultations, the dates, attendees, topics covered and conclusions should be recorded and included with the EAR. These are to take the form of meetings, at

which the findings of the EAR will be presented in addition to key background information. Comments are recorded and the EAR updated accordingly.

The executing and implementing agencies will send written endorsements to ADB for disclosing these documents on ADB's website. The EA/IA will also provide relevant safeguards information in a timely manner, in an accessible place and in a form and language(s) understandable to affected people and other stakeholders.

4.2 Public consultation during construction

Prior to construction, subproject design and the EAR document is disclosed and feedback sought. During construction and operation, the project developer is obliged to inform project affected people and other stakeholders of project activities which are likely to create environmental and social impacts, and to allow them to access general information about the subproject. In addition, should people affected by the project have any grievances, they have the right of lodging complaints through a grievance redress process established for the subproject.

4.3 Grievance Redress Mechanism

A project-specific grievance redress mechanism (GRM) will be established to receive, evaluate and facilitate the resolution of AP's concerns, complaints and grievances about the social and environmental performance at the level of the subproject. The GRM will aim to provide a time-bound and transparent mechanism to voice and resolve social and environmental concerns linked to the project. A common GRM will be in place for social, environmental, or any other grievances related to the Project.

A well-defined grievance redress and resolution mechanism will be established to resolve grievances and complaints in a timely and satisfactory manner. The objective of the grievance redress mechanism is to resolve complaints as quickly as possible and at the local level through a process of conciliation; and, if that is not possible, to provide clear and transparent procedures for appeal. All affected persons will be made fully aware of their rights, and the detailed grievance redress procedures will be publicized through an effective public information campaign.

The PMU and PIUs will ensure that the GRM is fully disclosed prior to construction: (a) in public consultations, (b) through posters displayed in the offices of the PMU, PIU, township and ward as well as at strategic places within the main subproject areas (posters to include names and contact details).

The following procedures for grievance redress are proposed:

- Stage 1: In the first instance, AP/s will address complaints to the ward arbitration unit or other designated grievance officers. The unit will organize a meeting with the AP/s to resolve the issue using its traditional methods of conciliation and negotiation; the meeting will be held in a public place and will be open to other members of the public to ensure transparency.
- Stage 2: If within 5 days of lodging the complaint, no understanding or amicable solution can be reached or no response is received from the village arbitration unit, the AP/s can bring the complaint to the PIU. The PIU will meet with the AP/s to discuss the complaint, and provide a decision within 10 days of receiving the appeal.
- Stage 3: If the AP/s is not satisfied with the decision of the PIU or in the

absence of any response, the AP/s can appeal to the PMU. The PMU will provide a decision on the appeal within 10 days.

- Stage 4: If the AP/s is still not satisfied with the decision of the PMU, or in the absence of any response within the stipulated time, the AP/s can submit his/her grievance to MOHT or the Office of the Chief Minister. The MOHT or the Office of the Chief Minister will render within 10 days of receiving the appeal.
- Stage 5: As a last resort, the AP/s may submit his/her case to the Court of Law. The complaint will be lodged with the Court of Law; the decision of the Court will be final.

Safeguard monitoring reports will include the following aspects pertaining to progress on grievances: (a) number of cases registered with the Grievance Redress Committee (GRC), level of jurisdiction (first, second, and third tiers), number of hearings held, decisions made, and the status of pending cases; and (b) lists of cases in process and already decided upon may be prepared with details such as name, ID with unique serial number, date of notice, date of application, date of hearing, decisions, remarks, actions taken to resolve issues, and status of grievance (i.e. open ,closed, pending).

5 Staffing Requirements and Budget

Subject to the scope of the selected investments, and outputs from the proposed surveys, environment management expertise (international and / or national) will be identified to contribute and provide technical oversight, as necessary to the overall design of the sub-project investments.. Based on past experience, possible budget is estimated below on a lump sum basis (figures below are subject to change)

Item	UNIT COSTS	QUANTITY	COST (US$)
International Environment Specialist	$ 16,000	2	$32,000
Air Travel and Per Diem			
International Air Travel			
Domestic Air Travel			
Per Diem: International Specialist			
Per Diem: National Specialist in provinces			
Office Consumables	Lump Sum		
Report printing and copying	Lump Sum		
Communications	Lump Sum		
Total			**$16,000**

ANNEX "A"

Environmental Safeguards Guidelines for Small Civil Works

A. Nature of Expected Civil Works

The Economic Empowerment of the Poor and Women in the East-West Economic Corridor is intended to support micro and small enterprise (MSE) development and increased employment and economic opportunities for the poor and women from selling crafts and local food with high market demand, for local and tourist markets. The project locations are Mawlamyine, Mudon, Kyaikhto and Chaungzon Island – four townships in Mon state. The Project outcome is micro and small enterprises enabled to increase business activities in project areas. The outcome will be achieved through four complimentary outputs namely: Output 1. Skills and management capacity of MSEs and their employees developed; Output 2. Access to business services, credit and commercial networks strengthened; Output 3. Infrastructure to support access to markets and processing facilities improved; and; Output 4. Capacity of EA, IA and key stakeholders enhanced.

The project is contemplating two types of infrastructure to support a broad range of stakeholder and beneficiaries in Mawlamyine, Kyaiktho, Mudon and Chaungzon Island. The first is craft and souvenir market proposed for Mawlamyine City at a site yet to be determines. The selection criteria (minimum area of 1200 m^2 including parking lot) shall ensure that the site is: (i) well drained and not prone to flooding (ii) does not require large volumes of backfill to achieve desired site land profile; (iii) aim to leave as many existing large trees and native vegetation as possibly (if any), (iv) access to mains power, (v) access to mainline sewerage and storm water discharge systems and (vi) not in conflict with other uses – residential & industrial sites. Access: A paved road strong enough to carry 12 ton tourist buses. Location: Close to popular tourist sites. The FF mission identified at least one site that is currently close to an existing well-known tourist site at Kyaikthanlan Pagoda that provides an example satisfies all of the environmental conditions above. However, the GOM will allocate the land for the market.

The second proposed infrastructure most likely constructed at Kyaiktho is a multi-product processing facility – most likely processing fruit and vegetables such as fruit jams, pickles and sauces for the tourist trade. During the FF mission no specific land was identified for this purpose. However, the FF team did provide the GOM with a land specification for this processing center. The land specification is: One Plot Minimum Area: 30m x 30 m = 900 m^2 (includes parking lot); or Two Plots Minimum Areas: 20 x 20 m = 400 m^2 . in addition, the site must be: (i) well drained and not prone to flooding (ii) does not require large volumes of backfill to achieve desired site land profile; (iii) aim to leave as many existing large trees and native vegetation as possibly (if any), (iv) access to mains power (v) ample space for onsite waste water treatment (vi) proximity to sufficient storm water discharge canals, culverts and waterways and (vi) not in conflict with other uses – residential & industrial sites Access: Paved road strong enough to carry 12 ton delivery and dispatch trucks Location: Convenient and close to producer's villages.

In both cases, the land used for these civil works will be existing public/government land and therefore no private land acquisition or involuntary resettlement is foreseen.

B. Purpose of these Guidelines

Given the nature and small scale of the proposed civil works under the project, an environmental assessment report is proposed for the management of environmental issues during construction. There are likely to be some concerns relating to inconveniences or nuisances to surrounding areas during construction which will require careful construction planning and management. Therefore, for the purpose of enhancing environment friendly measures and mitigating any adverse impacts caused by the construction activities, these *Environmental Safeguard Guidelines* for small civil works funded under this project have been prepared and shall be implemented by the concerned executing and implementing agencies (EA and IA) – The Ministry of Hotels and Tourism and the Office of the Chief Minister of Mon State.

The Environmental Safeguard Guidelines for Small Civil Works aim to establish some simple rules, procedures and institutional arrangements to be utilized under the " Economic Empowerment of the Poor and Women in the East West Economic Corridor " project with regard to identification, monitoring and mitigation of possible adverse environmental impacts with respect to small civil work activities undertaken in this project. The responsible ES/IA are expected to follow these procedures and keep the records and documentation for later supervision.

These Guidelines are in alignment with ADB Safeguards Policy Statement 2009 and the environment provisions of the Government of Myanmar.

C. Three-Step Procedures to be Followed

The concerned EA/IA are expected to carry out the following simple three-step procedures for preparing an appropriate environmental assessment report in undertaking any civil works under this project. The environmental assessment report will comprise the following three steps: conducting a site environmental safeguard impacts analysis, performing a checklist of some environment friendly construction design criteria, and establishing a standardized environmental management plan (EMP).

Step 1: Preparation of 'Construction Site Checklist' to identify Key Environmental Safeguard Issues

As a first step prior to construction, the concerned EA/IA must develop and complete a simple *Construction Site Checklist* to determine possible environmental impacts/nuisances for every civil work proposal. The Construction Site Checklist aims to identify and prepare for any environmental safeguards issues incurred by the construction. The checklist will screen out and ensure the site for the civil works has appropriate conditions and characteristics of environmental, architectural, and cultural value and physical land use. In case any potential adverse environmental impacts are identified then they will require input into the EMP (step 3 below).

A sample of the Construction Site Checklist is provided below.

Checklist-1: Sample of Format for Construction Site Checklist

General Information	
Name of Project	*Name of site for construction*
Name of engineer/ technical officer	*Person(s) who conducted the studies*
Date of Site Study Completed	*The date on which the on site studies were completed.*

Information Source	*Name and contact of person(s) interviewed/met*			
Proposed Output	*Proposed construction*			
Environmental Issues	Yes	No	Unknown	Remark/ Recommended Action
1. Adequacy of space for construction				
2. Adequacy of access to the construction				
3. Adequacy of space to build/expand the building space in the future				
4. Freeness from squatters or titling conflict with local residents				
5. Potential interruption or limitation of access to dwelling or business on the site				
6. Potential impact to high architectural or cultural value on the site or within the immediate vicinity				
7. Potential deterioration of urban quality and/ property value in the immediate vicinity. *(For urban setting)*				
8. Interruption or limitation of access to sidewalks, power and telephone lines, water and sewerage, sanitation system, and other environmental services.				
9. Encroachment/reduction of gardens or green areas.				
10. Land used is Public/Government Owned*				
11. Resettlement of families or businesses due to land use for construction				
12. Flood on the site in the wet season *(write down how deep and how long it usually floods on the site)*				
Others (describe)				

Summary of Overall Assessment: *Prepare a short summary of an overall assessment basing on the site screening results above. What recommendation/suggestion is made on the specific civil works project?*

*Note that **no buildings or construction can be undertaken on land that is privately owned or on which there is any form of land dispute**. If the Construction Site Checklist reveals this then an alternative site will have to be considered by the concerned IA.

The EMP included in these Guidelines under Step 3 will be attached as annex to the contract.

Step 2: Preparation of Checklist on Environmentally Friendly Construction Design Criteria to be Used

The second step in the environmental safeguards procedures for the civil works would involve completion of a checklist of some specific design criteria to be adopted in the process of construction by the chosen contractors. These design criteria

involve certain environmentally friendly/enhancing elements that would avoid or minimizes incurrence of adverse environmental impacts. These design criteria include ensuring of appropriate ventilation, lighting and sanitation facilities, as well as recommendations on use of environmentally friendly materials. It is not expected that all of these design criteria would be adopted in each case, but the effort should be to adapt as many as possible in the engineering and architectural design of the proposed civil works.

This checklist should be completed by the proposed contractors to confirm the use of the environment enhancing design criteria during construction/renovation of the proposed offices. A sample of the Checklist on Environmentally Friendly Design Criteria is provided below.

Checklist 2: Sample Format for Checklist on Environmentally Friendly Design Criteria

General Information				
Name of Project	*Name of site for construction*			
Name of engineer/ technical officer	*Person(s) who conducted the studies*			
Date of Site Study Completed	*The date on which the on-site studies were completed.*			
Information Source	*Name and contact of person(s) contacted*			
Proposed Output	*Proposed construction*			
Design Criteria	**Yes**	**No**	**Unknown**	**Remark**
1. Maximizing the blending of architectural design to important cultural site next or nearby to the site.				
2. Maximizing natural light in order to minimize artificial light needs.				
3. Maximizing natural ventilation systems, minimizing the necessities of air conditioning				
4. Maximizing rain water storage for the irrigation of gardens and green zones in the office (where applicable)				
5. Promoting the usage of environment-friendly materials (avoid asbestos and other hazardous or toxic materials)				
6. Planting of native species in gardens and green areas in the offices (where applicable)				
7. Stabilization of slopes using vegetative measures (where required)				
Others (describe)				

Summary of Overall Assessment: *Prepare a short summary of an overall assessment basing on the design criteria screening results above. What recommendation/suggestion is made to the project?*

Step 3: Preparation of a Standardized Environmental Management Plan (EMP)

After completing the construction site and environment-friendly design criteria screening using the above checklist formats, the last step in the environmental safeguards procedures would be the development of a simple EMP that should be treated as environmental specifications for construction.

As the small-scale construction activities envisaged might cause impacts and nuisance to nearby surroundings, they need to be avoided or mitigated through application of good engineering practices and strict environmental safeguards measures including use of environment-friendly construction materials and equipments, waste management techniques especially for construction dust and debris, noise control, site management, safety controls, provision of clean water and sanitation facilities etc.

A sample EMP table covering potential adverse environmental problems and corresponding mitigation measures is provided below. It is expected that all Contractors working on civil works under Output 3 will adhere to this as part of the bidding specifications and the Contractor's Work Plan. This EMP should include the environmental safeguards issues that may occur during construction and solutions or what the contractor must do to solve these problems and should draw on the two checklists developed under Steps 1 and 2.

Environmental Management Plan for Small Civil Works: Matrix of Potential Environmental Impact and Mitigation Measures: Mawlamyine Craft Market Site, Buildings and Car Park

Issue	Mitigation measures	Signifi-cance	Duration	Who responsible?		Monitoring - Management
				Construction	Implementation	
1. Risks & Mitigations Measures During Market Design						
Site Selection Criteria (Minimum and mandatory requirements)	Land for Craft Market in Mawlamyine Minimum Area: 40m x 40 m = 1200 m2 (includes parking lot) Land Geography: Ideally (i) well drained and not prone to flooding (ii) does not require large volumes of backfill to achieve desired site land profile; (iii) aim to leave as many existing large trees and native vegetation as possible (if any), (iv) access to mains power, (v) access to mainline sewerage and storm water discharge systems and (vi) not in conflict with other uses – residential & industrial sites; (vii) access: paved road strong enough to carry 12 ton tourist buses and (viii) location: close to popular tourist sites	D4	Long Term	Design Engineer include costs of tree planting in project design. EA and IA	Market Management Committee	Environmental Specialist (ES), IA, EA,
Loss of site trees	Tree clearing should be avoided as much as possible, and if unavoidable, the removed trees need to be replaced	D2	Medium term	Design Engineer include costs of tree	Design Engineer	Environmental Specialist (ES), IA, EA,

Issue	Mitigation measures	Signifi-cance	Duration	Who responsible?		Monitoring - Management
				Construction	Implementation	
	by re-planting new trees. Incorporate provisions for tree-planting (if required) in project costs			planting in project design		
Drainage	Natural drainage channels around the buildings should be constructed with sufficient gradient to encourage discharge of rainwater directly into municipal waste-water collection system.	D2	Long term	Design Engineer	IA/ EA	ES, IA, EA
2. Risks & Mitigations Measures During Construction Phase						
Dust from construction works	Water to be sprayed during construction, particularly in dry season if any complaints received over dust.	D2	Short term	Contractor	Contractor	IA/EA/ES to check the site during construction interview locals etc.
Dust from dry material handling	Dry materials stored on site to be covered with tarpaulins; Vehicles transporting materials are to be covered to reduce spills and dust onto road.	D2	Short term	Contractor	Contractor	ES, IA, EA
Air pollution and noise	Vehicles and construction equipment are to be maintained to meet Myanmar emission and noise standards to limit emissions that cause air pollution and noise Limit construction period 8.00 to 17.00 hrs daily with no work on Sundays	D2	Short term	Contractor	Contractor	ES, IA, EA
Human waste from construction	Provision of sanitary facilities (temporary toilets, etc.) with proper waste disposal will be provided by contractors	D2	Short term	Contractor	Contractor	ES, IA, EA
Solid waste generation from construction camp, work sites and workers	Sufficient garbage containers are to be provided in construction camps and at work site, and be emptied daily, the waste being disposed of in an approved landfill or site to avoid solid waste creating a nuisance and encouraging disease vectors (such as flies and rats) or blocking drainage system and hazard to human health and	D2	Short term	Contractor	Contractor	ES, IA, EA to check & observe the construction areas and camp sites

Issue	Mitigation measures	Signifi-cance	Duration	Who responsible?		Monitoring - Management
				Construction	Implementation	
	environment. Every camp and work site to be cleaned before leaving.					
Traffic and transport of equipment	Construction vehicles will comply with national speed limit and will drive at low speeds, especially near market, schools, hospitals, and populated areas.	D2	Short term	Contractor	Contractor	ES, IA, EA
Traffic congestion and accidents	Construction vehicles to be parked at designated off road places to save blocking road.	D2	Short term	Contractor	Contractor	ES, IA, EA to check & observe trucks at constructio n area
Safety	Put up construction signs for public, safety-first signs at the construction area, and place suitable barriers around works sites to prevent people or animals going onto the site.	D2	Short term	Contractor	Contractor	ES, IA, EA
Soil erosion	During site clearance of surface vegetation (if any) surface soil can be washed away into river or can block ditches and culverts, damage adjacent land & cause deterioration in water quality. Provide silt traps on any temporary drains and re-vegetate exposed soil on site as soon as possible to reduce runoff.	D3	Short term	Contractor	Contractor	ES, IA, EA
Water contamination	The most severe water quality impact on the river would be from bitumen, diesel or waste oil. Since these substances are toxic to living organisms, the following will observed: Diesel and waste oil are to be handled and stored carefully to prevent leakage or spill. Waste oil is to be collected, stored and disposed at approved sites (according to national standard). Storage is to be in drums, raised off the ground, covered to keep rain out and surrounded by a bund	D2	Short term	Contractor	Contractor	ES, IA, EA

Issue	Mitigation measures	Signifi-cance	Duration	Who responsible?		Monitoring - Management
				Construction	Implementation	
	to contain any spills and simplify clean up. The Contractor shall prepare a Spill Management Plan (including measures to be taken and equipment to be used) to ensure adequate cleanup of any spills.					
Loss of trees	Tree clearing should be only carried out in accordance with the design plan. Cutting of trees for firewood is strictly forbidden.	D2	Short term	Contractor	Contractor	ES, IA, EA
Worker safety and health	Workers should wear PPE (personal protection equipment) during work time to ensure that they are safe and good health. Contractor should develop a health and safety plan. Site Manager should educate workers on health & safety protection.	D3	Short term	Contractor	Contractor	ES, IA, EA
Transmission of communicable diseases	Provide adequate sanitation and potable water. Provide adequate cooking facilities for workers. Remove waste food and dispose in sanitary fashion. Do not encourage vector carrying vermin such as rats flies etc. Education of workers on need for cleanliness and transmittable diseases. Provide showers and washing facilities for construction workers.	D3	Short term	Contractor	Contractor	ES, IA, EA
Stagnant water areas (breeding mosquitos)	Do not allow pools or ponds or water to form or allow water to be caught in empty containers. Check daily and remove stagnant water to prevent mosquito breeding. If night watchmen are kept on camp provide with clean bedding and mosquito nets.	D2	Short term	Contractor	Contractor	ES, IA, EA
Historical artifacts	Should any historical remains or artifacts be found during site formation	D2	Short term	Contractor	Contractor	ES, IA, EA, MoC

Issue	Mitigation measures	Signifi-cance	Duration	Who responsible?		Monitoring - Management
				Construction	Implementation	
	and construction, work will immediately stop and the Construction Manager informed who will relay this information to the EA-IA as soon as possible for appropriate investigation by Ministry of Culture					
3. Risks & Mitigations Measures During Operational Phase						
Traffic accident	Provide traffic sign-boards at approach to market site and car park. Use speed reduction signs and road safety devices such as "rumble strips" (for reducing speed), paint zebra crossing lines for access from car park to market. Have stopping layby for coaches on same side as market to discharge passengers to market before coach parks on car park.	D3	Long term	Market Operator (Cost of the sign boards should be incorporated by Engineer)		ES, IA, EA
Cooking Facilities	Restaurants and heating facilities should be provided with LPG gas cylinders for clean cooking. Burning of firewood should not be allowed. All food waste should be removed off site to a sanitary landfill daily or local composting area located in an area that will not cause negative environmental impacts or public nuisance.	D3	Long term		Market Operator	ES, IA, EA
Sanitary facilities	Toilets and washing areas should connected to underground septic tanks with subsurface soak ways. These should be located as far from the river as possible a minimum of 15m from any wells used for potable water abstraction – but preferably 100 meters from potable water supplies.	D3	Long term		Market Operator	ES, IA, EA
Solid waste	Waste bins should be located at frequent intervals to collect garbage	D3	Long term		Market Operator	ES, IA, EA

Issue	Mitigation measures	Signifi-cance	Duration	Who responsible?		Monitoring - Management
				Construction	Implementation	
	and discourage littering. Different colored bins should be used to encourage recycling. Paper, glass and aluminum cans should be collected and kept separate. Segregation at source can assist in generating revenue from recycling materials. No open burning of solid waste will be allowed on the site.					
Plastic Bags	The use of plastic bags for carrying shopping materials should be banned. Food can be sold in clean hygienic natural materials such as banana leaves. Other products should be sold in bags made of textile materials. If plastic bags are to be used then cornstarch polymerized bags should be used which are biodegradable.	D1		Market Operator		ES, IA, EA

Note: D1 = Not significant, D2 = small impact, D3 = moderate impact, D4 = big impact; Short term = less than 1 year, medium term = 1 to 5 years, long term = More than 3 year.

All these measures **should be included in bidding document and contractor's workplan** as part of the specifications for construction that will be followed to address any potential environmental safeguard concerns.

D. Institutional Arrangements

The Project Director in the PMU is in charge of overseeing the civil works components. S/he will be supported by the Project Manager and Deputy Project Manager in the PIU as well as the Project Consultant Team Leader, Consultant Deputy Team Leader , International Environment Specialist consultant and the Civil Engineer. A summary of the institutional arrangements for following the above procedures is given below:

1. Construction Site Checklist: **The PIU** with support from the International Consultant Team Leader and the Environment Specialist Consultant are responsible for completing and sending results of the environmental safeguards issues screening undertaken in the Construction Site Checklist with recommendation to PMU Project Director for review and endorsement. The final review and clearance should be performed by the PMU Project Director.

2. Checklist for Environmentally Friendly Design Criteria: The PIU with support from the International Consultant Team Leader and the Environment Specialist Consultant

should complete the Environmentally Friendly Design Criteria checklist in collaboration with the Civil Engineer. These design criteria should be reviewed and cleared with the PMU Project Director and should form part of the bidding documents and Contractor Work Plan.

3. EMP Development and Clearance: Based on the Construction Site and Design Criteria checklists above and EMP will provide recommendations and need to ensure that :

- The construction will not have any unacceptable impact on the environment;
- The construction design should be changed to avoid unacceptable impact on the environment;
- The construction should not be implemented, because the impact on the environment will be bigger than the benefit from the project.

Oversight and final clearance for the EMP will be made by the PMU Project Director . The EMP will then become part of the Contractor Work Plan and shall be referred to in their contracts for each piece of civil works.

E. Monitoring, Supervision and Reporting

The selected contractor(s) must submit their completed work plans to the PMU and PIU prior to initiating their contract for each piece of civil works. The Contractor's Workplan should have incorporated the agreed Environmentally Friend Design Criteria being used as well as the agreed EMP described above, clearly listing:

(a) environmental problems that may occur during construction;
(b) solutions or what the contractor must do to solve these problems

The PMU Project Director must approve the work plan before signing the contract.

The PMU Project Director with support from International Team Leader consultant and Civil Engineer are responsible for supervising the adherence to the agreed EMP by the selected contractors in each civil works project through periodic audits. The site and construction design criteria checklists and EMP table above should be updated/improved on annually based on experience and findings from the project implementation and supervision. Environmental Safeguards specialist in ADB will separately review adherence to the Environmental Safeguards guidelines in the civil works projects during their annual supervision mission. All records of the above Environmental Safeguards procedures, including the relevant checklists and EMPs, shall be kept by the concerned EA for review during these supervision missions.