

MYANMAR

MYANMAR COUNTRY ENVIRONMENTAL ANALYSIS

Sustainability, Peace, and Prosperity:

Forests, Fisheries, and Environmental Management

ENVIRONMENTAL IMPACT ASSESSMENT SYSTEM DIAGNOSTIC



WORLD BANK GROUP

THE WORLD BANK
IBRD • IDA

IFC International
Finance Corporation

© 2019 International Bank for Reconstruction and Development and International Finance Corporation / The World Bank Group
1818 H Street NW
Washington DC 20433
Telephone: 202-473-1000
Internet: www.worldbank.org

This work is a product of the staff of The World Bank Group with external contributions. The findings, interpretations, and conclusions expressed in this work do not necessarily reflect the views of The World Bank Group, its Board of Executive Directors, or the governments they represent.

The World Bank Group does not guarantee the accuracy of the data included in this work. The boundaries, colors, denominations, and other information shown on any map in this work do not imply any judgment on the part of The World Bank Group concerning the legal status of any territory or the endorsement or acceptance of such boundaries.

Rights and Permissions

The material in this work is subject to copyright. Because the World Bank Group encourages dissemination of its knowledge, this work may be reproduced, in whole or in part, for noncommercial purposes as long as full attribution to this work is given.

Any queries on rights and licenses, including subsidiary rights, should be addressed to World Bank Publications, The World Bank Group, 1818 H Street NW, Washington, DC 20433, USA; fax: 202-522-2625; e-mail: pubrights@worldbank.org.

Cover photo: ©Lesya Verheijen

MYANMAR COUNTRY ENVIRONMENTAL ANALYSIS

Sustainability, Peace, and Prosperity:

Forests, Fisheries, and Environmental Management

ENVIRONMENTAL IMPACT ASSESSMENT SYSTEM DIAGNOSTIC

Support by



CONTENTS

ACKNOWLEDGEMENTS	iv
ABBREVIATIONS AND ACRONYMS	v
EXECUTIVE SUMMARY	vii
INTRODUCTION	1
1. ENVIRONMENTAL MANAGEMENT IN MYANMAR	3
1.1 Environmental Law and Regulations	4
1.1.1 2008 Constitution	4
1.1.2 Environmental Conservation Law (2012)	4
1.1.3 Environmental Conservation Rules (2014)	4
1.1.4 EIA Procedure (2015)	5
1.1.5 National Environmental Quality (Emission) Guidelines (2015)	5
1.1.6 Myanmar Sustainable Development Plan (2018–2030)	5
1.1.7 National Environment Policy (2019)	5
1.1.8 EIA and EMP Guidelines	6
1.2 International Environmental and Social Standards	6
1.2.1 World Bank Environmental and Social Framework (ESF) (2017)	6
1.2.2 IFC Performance Standards	7
1.2.3 ADB Safeguard Policy Statement	8
1.3 Institutional Arrangements	8
1.3.1 NECCCCC	8
1.3.2 MONREC	8
1.3.3 ECD	8
1.3.4 EIA Division	9
1.4 MONREC Budget Allocations and Revenue	10
1.5 Limited Budget and Funding for EIA System, Monitoring, and Compliance	12
2. KEY CHALLENGES AND ISSUES	13
2.1 Status of EIAs/IEEs/EMPs Submitted	15
2.1.1 Sector and Industry	16
2.1.2 Progress in Review of EIAs/IEEs/EMPs in the Period from June 2018 to February 2019	18

2.2 Delays in Initial Review of EIAs/IEEs/EMPs	18
2.2.1 Screening	19
2.2.2 Scoping	19
2.2.3 Administrative Review	20
2.2.4 Role of State/Region ECD Offices in Review of EMPs	20
2.2.5 Third-party review of EIA / IEE / EMP	21
2.3 Delays in EIA Approval and ECC Issuance	22
2.4 Limited Capacity of ECD to Review EIAs/IEEs/EMPs	23
2.5 Inadequate Quality of EIAs/IEEs/EMPs Submitted	24
2.6 Influx of Poor-quality EMPs in the Mining Sector	26
2.7 Lack of Capacity to Enforce Compliance of Factories and Other Sectors	29
2.8 Applying the EIA Procedure to SEZs	31
2.9 Limited Use of Strategic Environmental Assessment for Planning	33
2.10 Inadequate Public Participation and Disclosure	35
2.11 Limited Provisions for Social Impact Assessment (SIA)	36
2.12 Need to Resolve Issues with Myanmar Investment Laws and Sector Laws	36
3. CURRENT CONTEXT FOR ACTION	39
3.1 ECD Action Plan	40
3.2 Ongoing Support by Development Partners	41
3.3 Lessons from the Mekong Region	42
4. RECOMMENDATIONS	45
4.1 Tracking and Transparency	46
4.2 Strengthening ECD capacity	46
4.3 Operationalizing Financial Mechanisms	47
REFERENCES	52
ANNEXES	54
Annex 1. Other relevant natural resources and sector legislations	54
Annex 2. Approach and survey results	55
Annex 3. Survey results for EIA Division	77
Annex 4. Survey results for E&S consultants	79
Annex 5. Previous assessments of EIA systems in Myanmar	81
Annex 6. Urgent actions identified by the ECD	84
Annex 7. Development partner support to the ECD	85



ACKNOWLEDGEMENTS

This Country Environmental Analysis was prepared by a team led by Martin Fodor and Stephen Ling. The team was composed of Aye Marlar Win, Kate Lazarus, Katelijn van Berg, Khine Thwe Wynn, Lesya Verheijen, Ngwe Moe, Nina Doetinchem, Miguel Angel Jorge, Rory Hunter, Thiri Aung, Tun Tun Thein and Werner Kornexl.

The team would also like to acknowledge the generous support provided for the preparation of the report by the Australian Government Department of Foreign Affairs and Trade (DFAT), and Department for International Development of the United Kingdom (DFID).

ABBREVIATIONS AND ACRONYMS

ADB	Asian Development Bank	ERI	Earth Rights International
ASM	Artisanal and Small-scale Mining	ESCG	Environment Sector Coordination Group
AVI	Australian Volunteers International	ESF	Environmental and Social Framework
CEA	Country Environmental Analysis	ESIA	Environmental and Social Impact Assessment
CIA	Cumulative Impact Assessment	ESS	Environmental and Social Standard
CSO	Civil Society Organization	EU	European Union
DEIAA	District Environmental Impact Assessment Authority	FD	Forest Department
DENR	Department of Environment and Natural Resources	FFI	Flora and Fauna International
DDG	Deputy Director General	GAD	General Administration Department
DEPP	Department of Electric Power Planning	GDP	Gross Domestic Product
DG	Director General	GIIP	Good International Industry Practice
DICA	Directorate of Investment and Company Administration	GIS	Geographic Information System
DOM	Department of Mines	GoM	Government of Myanmar
DZGD	Dry Zone Greening Department	HIA	Health Impact Assessment
E&S	Environmental and Social	HPP	Hydropower Project
EC	Environmental Clearance	HSE	Health, Safety, and Environment
ECC	Environmental Compliance Certificate	ICT	Information and Communications Technology
ECD	Environmental Conservation Department	IEE	Initial Environmental Examination
ECL	Environmental Conservation Law	IFC	International Finance Corporation
ECPP	Environmental Conservation and Protection Plan	IFI	International Finance Institution
ECR	Environment Conservation Rules	ISO	International Standards Organization
EIA	Environmental Impact Assessment	JICA	Japan International Cooperation Agency
EMF	Environmental Management Fund	KBA	Key Biodiversity Area
EMIS	Environmental Management Information System	MCDC	Mandalay City Development Committee
EMP	Environmental Management Plan	MCRB	Myanmar Center for Responsible Business
EMS	Environmental Management System	MEAA	Myanmar Environmental Assessment Association
ENR	Environment and Natural Resources		

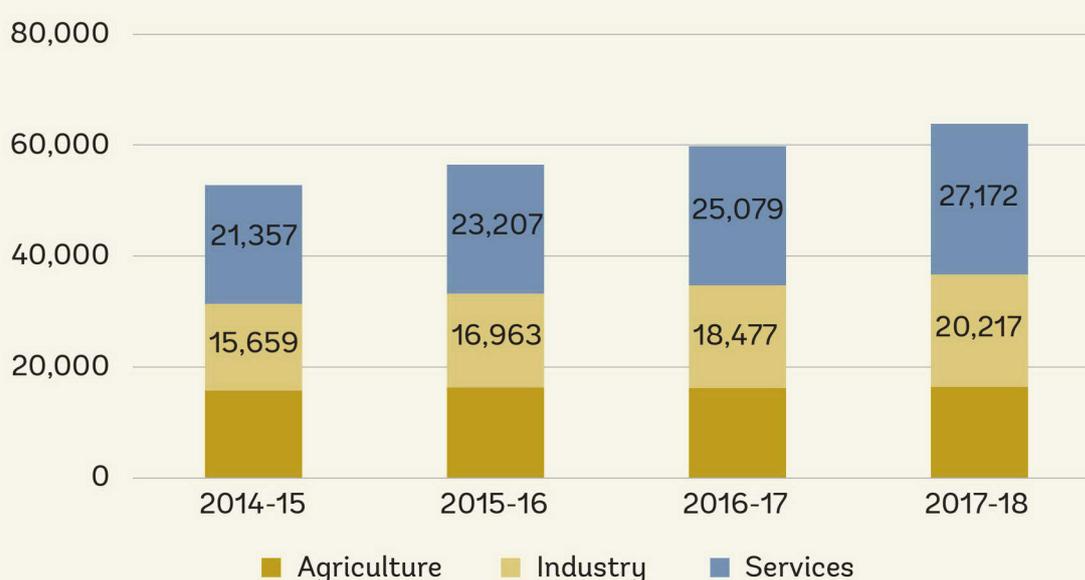
MGE	Myanmar Gems Enterprise	SLC	Safeguards Learning Center
MOC	Ministry of Commerce	SMEs	Small and Medium Enterprises
MOECAF	Ministry of Environmental Conservation and Forestry	SPS	Safeguard Policy Statement
MOEE	Ministry of Electricity and Energy	SWIA	Sector-wide Impact Assessment
MOGE	Myanmar Oil and Gas Enterprise	ToR	Terms of Reference
MOI	Ministry of Industry	TOT	Training of Trainer
MONREC	Ministry of Natural Resources and Environmental Conservation	TSMC	Thilawa SEZ Management Committee
MOPF	Ministry of Planning and Finance	UAG	Union Attorney General
MOU	Memorandum of Understanding	UCSB	Union Civil Service Board
MSDP	Myanmar Sustainable Development Plan	UN	United Nations
MTE	Myanmar Timber Enterprise	UNDP	United Nations Development Programme
NEA	Norwegian Environment Agency	UNEP	United Nations Environment Programme
NECCCC	National Environmental Conservation and Climate Change Central Committee	VLS	Vermont Law School
NEP	National Environment Policy	WCS	Wildlife Conservation Society
NEQ	National Environmental Quality	WWF	World Wild Fund for Nature
NEQA	National Environmental Quality Act	YCDC	Yangon City Development Committee
NGO	Nongovernmental Organization		
NWCD	Nature and Wildlife Conservation Division		
OSSC	One-Stop Service Center		
PA	Protected Area		
PAP	Project-affected People		
PCD	Pollution Control Division		
PES	Payment for Environmental Services		
PPR	Project Proposal Report		
PS	Performance Standard		
RIWG	Responsible Industry Working Group		
SEA	Strategic Environmental Assessment		
SEE	State-owned Economic Enterprise		
SEZ	Special Economic Zone		
SIA	Social Impact Assessment		

EXECUTIVE SUMMARY

Myanmar's gross domestic product (GDP) was US\$67 billion in 2017¹ and has been growing at a high rate of 7.2 percent in 2013–2018. The GDP growth rate is expected to be 6.2 percent in the 2018/19 fiscal year (World Bank Group 2018). Most of the contribution to GDP growth in the past five years has stemmed from industry (1.9 percentage points from manufacturing and 0.7 percentage points from other industries) and services (3.9 percentage points).

Figure 1

Myanmar GDP (real: MMK, billions)



Source: World Bank 2018.

Myanmar has relied heavily on natural resource exploitation to sustain economic growth, and serious environmental issues are emerging, underlining the importance of transparent and robust Environmental Impact Assessment (EIA) system. There are growing concerns around the impacts of the large-scale development, including deforestation, depletion of inland and coastal fisheries, land degradation, flooding and landslides, biodiversity loss, and the deterioration of water and air quality (IFC 2017; Raizer, Samson, and Nam 2015). A functioning EIA system is critical in identifying and managing the potential impacts of large-scale development and striking the balance between economic development, environmental conservation, and social inclusion.

Balancing economic growth and environmental protection remains a critical policy challenge. Myanmar was ranked 171st in the World Bank Group Doing Business 2019 report; in terms of environmental governance, Myanmar scored 138th out of 180 countries on the Yale Environmental Performance Index in 2018. There is a need to improve business regulations while increasing efficiency and effectiveness of EIA, monitoring, and compliance systems that support environmental and social (E&S) sustainability. This also underlines the need for effective public participation in environment and natural resources (ENR) management, which an effective EIA process can facilitate.

¹ <https://data.worldbank.org/country/myanmar>.

At the policy level, the Myanmar Sustainable Development Plan (MSDP) (2018–2030) and National Environment Policy (2019) provide the foundation for mainstreaming ENR into development planning. The Ministry of Natural Resources and Environmental Conservation (MONREC) and its Environmental Conservation Department (ECD) have also set ambitious targets to recruit more than 19,000 staff by 2025 and establish 73 offices at the district level and 365 offices at the township level. Internally, they have also recognized the urgent need to strengthen EIA systems.

Significant progress has been achieved in recent years by the Government of Myanmar (GoM) in establishing the legal and regulatory framework for environmental management. The GoM has introduced the Environmental Conservation Law (ECL) (2012), supported by the Environment Conservation Rules (ECR) (2014) and EIA Procedure (2015). The government has also set up an EIA Division to oversee the review and approval of EIAs, Initial Environmental Examinations (IEEs), and Environmental Management Plans (EMPs). Over the last three years, the World Bank, International Finance Corporation (IFC), Asian Development Bank (ADB), United Nations Development Programme (UNDP), Japanese International Cooperation Agency (JICA), Myanmar Center for Responsible Business (MCRB) and other development partners have invested in building the capacity of ECD through support to training and development of sector-specific guidelines.

Despite these investments in institutional strengthening and technical capacity, significant challenges remain in effectively implementing the EIA Procedure (2015). This is largely due to the limited resources and institutional capacity of ECD to review, approve, and follow up on EIAs for investments and developments across all sectors leading to a significant backlog of EIA/IEE/EMP reports.

The number of EIAs/IEEs/EMPs submitted is increasing every year, with a significant increase of EMPs in 2016–2017 and of all reports in 2017–2018 (Figure 2). A total of 2,783 reports were submitted as of January 31, 2019. A breakdown of submissions by sector shows that a high proportion of these reports is for the mining sector. While nearly all reports have been replied to (89.6 percent in total), only a small fraction has been approved. Only 6.9 percent (192) of the 2,783 reports submitted have been approved, leaving 250 EIAs, 482 IEEs, and 1,859 EMPs awaiting approval.

Figure 2

EIA/IEE/EMP received from FY2014/15 to FY2017/18



Currently, compliance activities are only carried out in response to complaints from the local community, and there is not an effective monitoring and inspection regime in place. Post-EIA monitoring, inspection, and audit stage remains weak across the Greater Mekong subregion due to the strong emphasis on the review of the EIA reports (ERI 2016). In Myanmar, less resources are committed to compliance and monitoring as the ECD is dealing with the review and approval of a significant volume of reports. A compliance strategy is needed that links the approval of documents with carrying out environmental inspection and monitoring to achieve measurable environmental outcomes on the ground.

Additional budget and resources are needed for increasing staffing levels, establishing offices and building ECD's institutional capacity. The planned budget allocation for MONREC in FY2017/18 was just under US\$2 million. The share of union budget allocated to environmental conservation activities has increased steadily (albeit modestly), from 0.15 percent in 2011/12 to 0.23 percent in 2016/17. Establishing the Environmental Management Fund (EMF) can potentially provide significant sources of funding that could be used to improve the implementation of the procedure as well as environmental inspection and monitoring (Schulte and Baird 2018).

This EIA system review identified the following key issues and challenges in implementing the EIA Procedure (2015):

- **Limited capacity and resources for the timely review and approval of EIA.** As of February 2019, only 37 out of 287 EIAs (13 percent) submitted had been approved.
- **Delays in issuing Environmental Compliance Certificates (ECCs).** As of June 2018, fewer than 10 ECCs had been approved and issued by the ECD.
- **Poor quality of EIAs/IEEs/EMPs submitted.** The ECD is dealing with a constant stream of documents that are largely inadequate due to the poor impact and risk assessment resulting in deficient EMPs and mitigation measures, particularly in the mining sector, which accounts for 72.2 percent (2,010) of the total reports submitted.
- **Lack of capacity to monitor the compliance of nine priority sectors (factories) to develop EMPs.** It was estimated that the ECD Notification No. 3/2018 (requiring factories in nine priority sectors to submit EMPs within a specified period) applied to 1,155 factories; as of February 2019, less than 10 percent of the factories had submitted EMPs.
- **There are challenges in applying the EIA Procedure to special economic zones (SEZs).**
- **There is limited use of Strategic Environmental Assessment (SEA) for planning.**
- **There is inadequate public participation and disclosure and provisions for social impact assessment (SIA) and lack of clarity on which ministry/department is responsible for social issues.**

The review also provides a set of clear recommendations and actions aimed at ensuring that the GoM has a modernized information system for managing the EIA process and that the ECD is equipped with the appropriate technical capacity, tools, budget, and resources to become a more effective environmental regulator.

The key actions to improve the EIA system include the following:

(1) Establish a transparent Environmental Management Information System (EMIS).

A transparent EMIS is needed to track the status of EIA, IEE, and EMP preparation and review and to facilitate the monitoring of their implementation and compliance by regulators and stakeholders. Public participation and attention to environmental assessment can greatly help mitigate the existing institutional capacity constraints.

(2) Adopt risk-based and outcome-focused approach to EIA review, approval, and monitoring.

This includes extending the current focus on EIA documents review to a systematic follow-up on their implementation and compliance. Focus should be on prioritizing high environmental risk projects and delegation and acceleration of EIA approvals based on risk. A clear compliance strategy is also needed for engaging regulated industries and simplifying the ECCs for practical compliance monitoring.

(3) Operationalize dedicated financial mechanisms to cover the costs of environmental assessment and compliance.

This includes operationalization of the EMF to provide funding to improve the implementation of the EIA Procedure and environmental inspection and monitoring (Schulte and Baird 2018). Generating environmental funding can also be facilitated through the establishment of systems for Payment for Environmental Services (PES).

(4) Strengthen environmental management institutions and mobilize resources to boost capacity at the national and subnational levels.

The staffing and resourcing of the ECD and other institutions responsible for environmental and pollution management at the national and subnational levels need to align with the expanding regulatory requirements and growth of the regulated economic sectors. Other institutional strengthening actions include establishing a third-party review mechanism to support the ECD with the review of EIAs and IEEs; conducting a functional review of the EIA Division and Pollution Control Division (PCD) regarding compliance, inspection, and monitoring; and strengthening the Safeguards Learning Center (SLC) for staff and stakeholder capacity.

INTRODUCTION

1. The World Bank and International Finance Cooperation (IFC) are supporting Myanmar in various aspects of environmental and social (E&S) risk management and governance through (a) technical assistance, analytical work, and capacity building and (b) promotion of good E&S management in the projects they finance. The World Bank and IFC in partnership with the Environmental Conservation Department (ECD) of the Ministry of Natural Resources and Environmental Conservation (MONREC) commissioned this review of the Myanmar Environmental Impact Assessment (EIA) system as a part of
 - (a) Broader Country Environmental Analysis (CEA) undertaken to better understand the environment and natural resource (ENR) trends in fisheries and forestry and identify interventions to strengthen environmental assessment and solid waste management and
 - (b) The technical and advisory support provided by the IFC Environmental and Social Advisory program to advance effectiveness of EIA systems needed to facilitate private sector development.
2. From October 2018 to April 2019, the World Bank and IFC guided the review of the EIA system in Myanmar. The EIA diagnostic review identifies the key challenges and provides recommendations for the EIA Division under the ECD in effectively implementing the EIA Procedure (2015), including staffing, administrative, technical, legal, and institutional issues.
3. This **EIA Systems Diagnostic** report is one of the main deliverables of the CEA alongside reports in the **Forestry** and **Fisheries** sectors. The findings of these three separate reports have also been consolidated into a **Synthesis Report**.
4. Surveys of EIA Division staff at the union and state/region level, staff of sector ministries, E&S consultants, private sector, and nongovernmental organizations (NGOs) have provided unique insights into existing challenges and a way forward for improving the system. The key findings of the face-to-face interviews and online surveys have been incorporated in this report; the recommendations were validated through consultations with ECD and development partners in March and April 2019.
5. The approach methodology for this EIA review and summary of the survey results are provided in Annex 2. The quantitative results (collected using the SurveyMonkey survey tool) for the EIA Division staff and E&S consultants are provided in Annexes 3 and 4, respectively.



photo: ©Rory Hunter

1

ENVIRONMENTAL MANAGEMENT IN MYANMAR

1. ENVIRONMENTAL MANAGEMENT IN MYANMAR

1.1 Environmental Law and Regulations

6. The key policies, law, rules, and procedures for environmental management in Myanmar are summarized in the sections below.

1.1.1 2008 Constitution

7. The 2008 Myanmar Constitution provides several important references to environmental conservation and sustainable development. Section 390 states, *“Every citizen has the duty to assist the Union in carrying out the following matters”*:

- Preservation and safeguarding of cultural heritage
- Environmental conservation
- Striving for development of human resources
- Protection and preservation of public property.

1.1.2 Environmental Conservation Law (2012)

8. The Environmental Conservation Law (ECL) was adopted in March 2012. It stipulates the basic principles of environmental conservation. According to the law, MONREC is responsible for implementing a system of EIA and Social Impact Assessment (SIA) to determine whether or not a project or activity to be undertaken by any government department, organization, or person may cause a significant impact on the environment.

9. The ECL is a framework law enabling coordination between government departments, government organizations, international organizations, NGOs, and individuals in matters of environmental conservation.

1.1.3 Environmental Conservation Rules (2014)

10. The rules were enacted in June 2014 and outlines guidance to integrate environmental conservation in sustainable development, ministry’s responsibility to develop relevant guideline and regulation, setup of a monitoring system, waste management, and conservation of natural resource and cultural heritage. Section 10 of the rule details the duty and power of the ministry and department for adopting EIA system. This section includes clauses related to the duty to form an EIA review body, duty for scrutinizing and determining EIA categorization depending on the proposed projects, requirement of a competent third-party organization to conduct EIA, and power to approve an EIA.

1.1.4 EIA Procedure (2015)

11. The EIA Procedure (2015) was passed by the Government of Myanmar (GoM) in December 2015. This procedure sets out specific requirements for scoping EIAs, Initial Environmental Examinations (IEEs) and Environmental Management Plans (EMPs); defining roles and responsibilities of the ECD and project proponent; and placing punishments for violating the requirements. Annex A of the procedure provides the project categorization screening to determine the need for the development of an EIA, IEE, or EMP.

12. The EIA Procedure is fairly standard and generally meets international good practice (Schulte and Baird 2018). Before the implementation of the ECL and EIA Procedure (2015), there was no public participation in decision making and no laws to regulate pollution, protect biodiversity, and consider social and health impacts from large-scale oil and gas developments.

1.1.5 National Environmental Quality (Emission) Guidelines (2015)

13. The National Environmental Quality (NEQ) (Emission) Guidelines came into effect in December 2015. The guidelines provide the performance level for effluent and emission control for various environmental aspects, such as air emission, noise pollution, dust, water, and wastewater effluent and discharge from development projects. Rather than developing emissions standards specific to Myanmar, the guidelines consist of IFC's Environmental Health and Safety Guidelines (Schulte and Baird 2018). Myanmar has not yet established nationwide ambient air or water quality monitoring networks, which constrains its ability to measure and limit ambient pollutant levels.

1.1.6 Myanmar Sustainable Development Plan (2018–2030)

14. The Myanmar Sustainable Development Plan (MSDP) provides the long-term vision of a peaceful, prosperous, and democratic Myanmar. The MSDP is structured around three fundamental pillars, five goals, 28 strategies, and 251 action plans. The MSDP is well aligned with Strategic Development Goals, the country's 12-point economic policy, and with Myanmar's international commitments. Cross-cutting issues, such as equity, inclusion, and sustainability, are also integrated into it. The MSDP Pillar 3 People and Planet is directly supported by Goal 4 of human resource and social development of a 21st century society and Goal 5 of natural resources and the environment for national prosperity.

1.1.7 National Environment Policy (2019)

15. The National Environment Policy (NEP) (2019) is expected to be approved soon and will supersede the NEP (1994). The NEP (2019) builds on the previous policy in expressing the core values:

- The wealth of the nation is its people, its cultural heritage, its environment, and its natural resources.
- It is the responsibility of the state and every citizen to preserve its natural resources in the interests of present and future generations.
- Environmental protection should always be the primary objective in seeking development.

16. The NEP contains 23 policy principles that can be grouped into three broad categories: (a) a clean environment and healthy functioning ecosystems, (b) sustainable economic and social development, and (c) mainstreaming of environmental protection and management.

1.1.8 EIA and EMP Guidelines

17. To provide clear guidance to the administrative staff, project proponents, and consultants in the development of EIA, IEE, and EMP reports and implementation of follow-up activities in accordance with the EIA Procedure, a number of EIA-related guidelines have been initiated by the ECD with the support of development partners and NGOs covering some critical sectors. The current status of the EIA guideline development activities and the organizations involved is summarized in Table 1.

Table 1

Status of EIA and sector guidelines in Myanmar

Name of document	Organization	Status
Environmental and Social Impact Assessment (ESIA) Guidelines for Hydropower Projects in Myanmar	IFC	Final draft
EIA Guidelines for Mining Sector	World Wide Fund for Nature (WWF) and Asian Development Bank (ADB)	Final draft
EIA Guidelines for Oil and Gas Sector	Norwegian Environment Agency (NEA)	Ongoing
Guidelines for Health Impact Assessment	ADB and Ministry of Health and Sport	Final draft
Guidelines for Public Participation in Myanmar's EIA Processes	Vermont Law School (VLS)	Final draft
EIA Guidelines for Myanmar Rubber Processing Industry	Care Myanmar	Ongoing
EIA General Guidelines and Environmental Compliance Certificate (ECC)	ADB	Final draft
EIA Review Guidelines for Limestone Quarries	Flora and Fauna International	Ongoing
Template for Stand-alone EMP of 9 Industrial Sectors	ECD	Final draft

18. Besides the above principal regulations for environmental management, there are several laws and regulations relating to natural resources and environmental matters administered by various sector ministries in Myanmar. Some of the other laws and regulations related to natural resources and sectors are listed in Annex 1.

1.2 International Environmental and Social Standards

1.2.1 World Bank Environmental and Social Framework (ESF) (2017)

19. Due to the requirement to ensure that people and the environment are protected from potential adverse effects from the World Bank financed projects, an Environmental and Social Framework (ESF) was introduced in 2017.² The ESF boosts protections and promotes sustainable development. The ESF is principally designed to support the borrower's projects that receive investment project financing from the World Bank.

20. The ESF consists of 10 Environmental and Social Standards (ESSs) which offer a broader and systematic coverage of E&S risks and impacts expected to be generated by financed projects. Individual guidance notes

¹ The ESF replaces the Environmental and Social Safeguards Policies.

are also prepared for each standard supporting convenient and effective implementation of the standards. Borrowers are required to follow standards relevant to the projects. In addition, the framework is designed to be systematic through providing standards, to be modern through offering solutions to various development demands and challenges, and to be harmonized, such as bringing the protections in line with other development institutions.

21. The framework also incorporates the cross-cutting E&S issues such as climate change, gender, nondiscrimination, and disability in the standards (Table 2).

Table 2

World Bank ESSs

ESS 1: Assessment and Management of Environmental and Social Risks and Impact
ESS 2: Labor and Working Conditions
ESS 3: Resource Efficiency and Pollution Prevention and Management
ESS 4: Community Health and Safety
ESS 5: Land Acquisition, Restrictions on Land Use and Involuntary Resettlement
ESS 6: Biodiversity Conservation and Sustainable Management of Living Natural Resources
ESS 7: Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities
ESS 8: Cultural Heritage
ESS 9: Financial Intermediaries
ESS 10: Stakeholder Engagement and Information Disclosure

1.2.2 IFC Performance Standards

22. IFC established eight Performance Standards (PSs) for its clients in 2012, which are similar to the World Bank's ESSs. IFC PSs define the client's responsibility for assessing and managing E&S risks and impact likely to be generated from development projects. The guidance notes are supportive to the PSs and provide guidance to the clients to meet the requirements of PSs. The eight PSs are outlined in Table 3. Furthermore, a number of good practice handbooks and good practice notes provide additional guidance to implement the IFC PSs.

Table 3

IFC PSs

PS 1: Assessing and Management of Social Risks and Impacts
PS 2: Labor and Working Conditions
PS 3: Resource Efficiency and Pollution Prevention
PS 4: Community Health, Safety and Security
PS 5: Land Acquisition and Involuntary Resettlement
PS 6: Biodiversity Conservation and Sustainable Management of Living Natural Resources
PS 7: Indigenous People
PS 8: Cultural Heritage

1.2.3 ADB Safeguard Policy Statement

23. The ADB Safeguard Policy Statement (SPS) 2009 identifies three key safeguard areas: Involuntary Resettlement, Indigenous Peoples, and the Environment. The SPS aims to promote sustainability of project outcomes by protecting the environment and people from projects' potential adverse impacts by avoiding adverse impacts of projects on the environment and affected people, where possible; minimizing, mitigating, and/or compensating for adverse project impacts on the environment and affected people when avoidance is not possible; and helping borrowers/clients to strengthen their safeguard systems and develop the capacity to manage E&S risks.

24. These safeguards require a structured process of impact assessment, planning, and mitigation to address the adverse effects of projects throughout the project cycle. The SPS requires that (a) impacts are identified and assessed early in the project cycle; (b) plans to avoid, minimize, mitigate, or compensate for the potential adverse impacts are developed and implemented; and (c) affected people are informed and consulted during project preparation and implementation (ADB 2009).

1.3 Institutional Arrangements

25. Improvements have been made with respect to staffing and allocating responsibility for environmental management including the establishment of the National Environmental Conservation and Climate Change Central Committee (NECCCCC), MONREC, and ECD with offices at the union, state/region, district, and township levels. These institutions are summarized below.

1.3.1 NECCCCC

26. The NECCCCC addresses the multi-sectoral issues of environment and climate change, under the guidance of the Vice President. It is chaired by the Union Minister of MONREC. The committee secretary is the Director General (DG) of the ECD, supported by a central working committee composed of representatives from six technical working committees.

1.3.2 MONREC

27. MONREC was established in March 2016 following a restructuring of ministries by the newly elected Parliament and Union government. The portfolio of the Ministry of Mines was merged with the portfolio of the Ministry of Environmental Conservation and Forestry (MOECAF), and MONREC was established. There are six departments, five enterprises, and one university under MONREC (Figure 3).

1.3.3 ECD

28. The ECD is the environment protection branch of MONREC; it was established in 2012, the same year as the ECL (2012), the first comprehensive law on environment, was enacted. The ECL is giving MONREC a range of duties and powers to implement the ECL, including the implementation of Myanmar's environmental conservation policies, laying down of national and regional work plans concerning environmental management, the development and implementation of a system for EIA, issuing of ECC, and issuing and enforcing of environmental regulations. A comprehensive list of the duties and powers of MONREC is contained in Chapter IV of ECL. The organizational structure of ECD is shown in Figure 4.

Figure 3

Organizational structure of MONREC

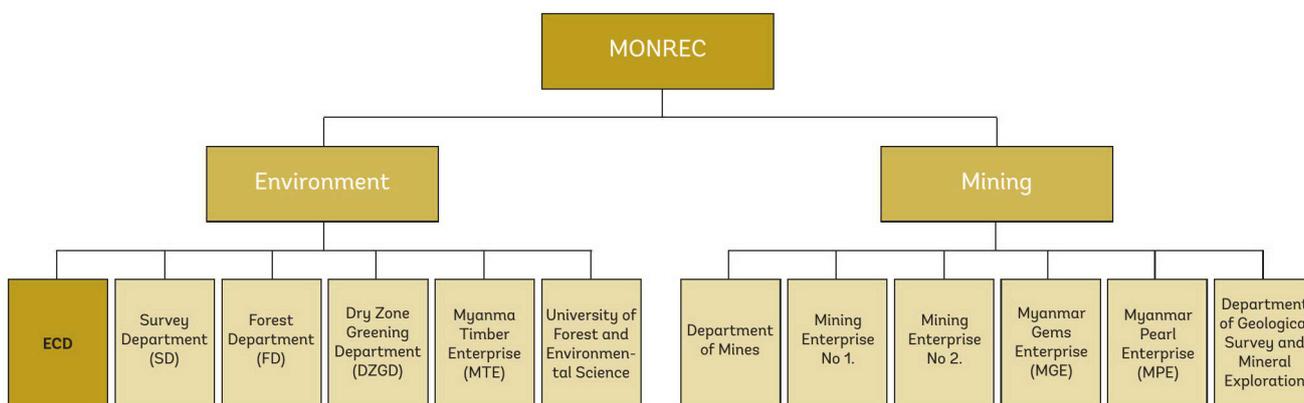
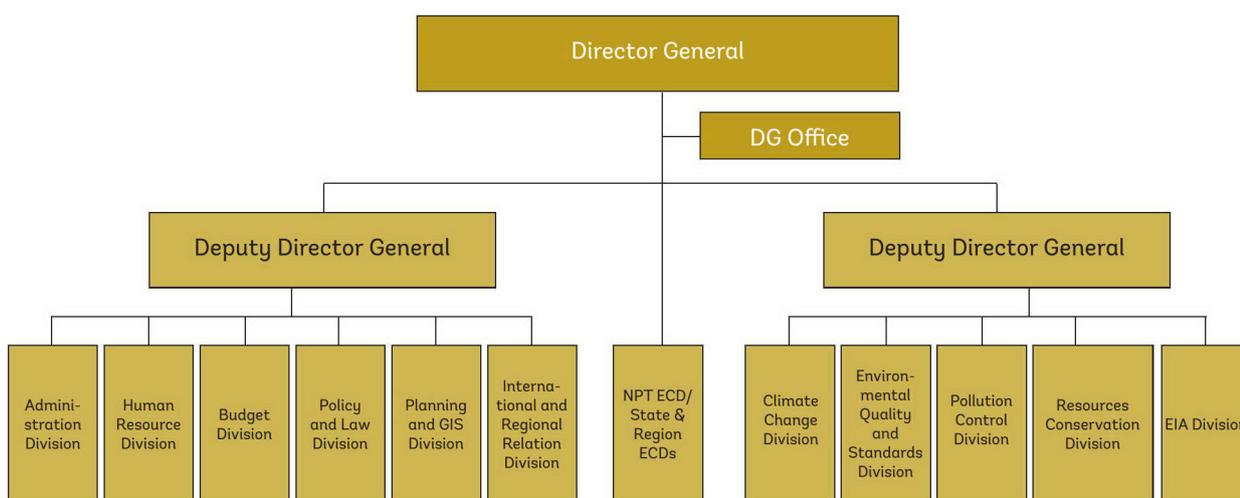


Figure 4

Organizational structure of ECD



29. The ECD has established offices in all 14 regions and states and one office for Naypyidaw Council. The department has a comprehensive plan to increase its capacity, both at the Head Office in Naypyidaw and the ECD offices at the state/regional level. The ECD is planning to recruit more than 19,000 staff by 2025, establish ECD offices at the district and township levels, and set up 73 ECD offices at the district level and 365 at the township level by 2025. In the FY2017/18, 13 district-level ECD offices were established. As of March 2018, the ECD had a total of 487 assigned staff: 166 officers and 321 staff.

1.3.4 EIA Division

30. The EIA Division has 42 staff assigned at the union headquarters with 41 vacancies still remaining to be filled (Table 4). Within the EIA Division, there are currently five sector teams for the review of EIAs/IEEs/EMPs: (a) Mining; (b) Hydropower; (c) Infrastructure; (d) Industry (Manufacturing); and (e) Agriculture, Livestock, Fishery, and Plantation. There are 83 EIA Division staff across the 14 state/region ECD offices (Table 5). Total EIA Division staff numbered 125 in March 2019.

Table 4

Staff profile in the EIA Division as of March 2019

Position	Existing	Sanctioned /allowed	Vacant
Director	1	1	0
Deputy Director	2	2	0
Assistant Director	4	4	0
Staff Officer	18	17	-1
Deputy Staff Officer	16	16	0
Deputy Assistant Staff Officer	0	16	16
Office Staff General	1	27	26
Total	42	83	41

Table 5

EIA Division staff by state/region as of March 2019

State/Region	EIA Division Staff
Kachin State	4
Kaya State	3
Kayin State	3
Chin State	2
Mon State	6
Rakhine State	7
Shan State	7
Yangon Region	9
Mandalay Region	7
Bago Region	4
Sagaing Region	10
Magway Region	5
Ayeyarwady Region	6
Tanintharyi Region	10
Total	83

1.4 MONREC Budget Allocations and Revenue

31. The Myanmar CEA included an assessment of the economic significance of ENR and the budget allocations and expenditure for key sectors. The findings related to conservation and environmental management are summarized below.

32. A review of MONREC budget allocation and expenditure found that the share of the union budget allocated to MONREC's environmental conservation activities had increased steadily (albeit modestly), from 0.15 percent in 2011/12 to 0.23 percent in 2016/17³ (Figure 5).

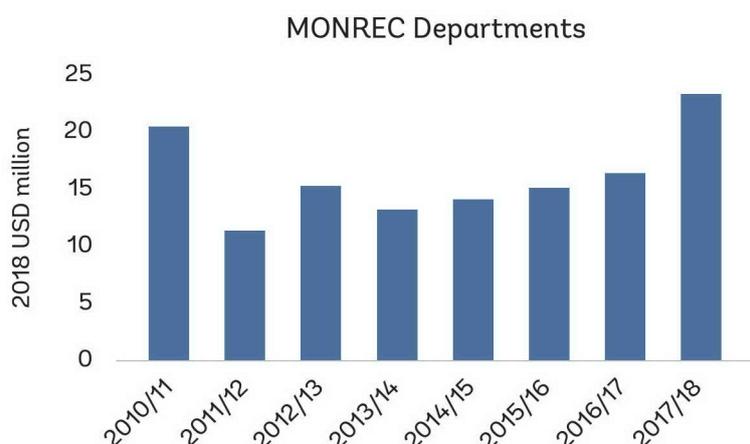
33. A detailed (although partial) review was undertaken in 2015 by the Wildlife Conservation Society (WCS), looking mainly at Protected Area (PA) expenditures, receipts, budgeting procedures, and financing constraints (Emerton, Kyin, and Tizard 2015). These figures were updated and expanded at the end of 2017, in partnership with WWF, to consider aggregate MONREC conservation-oriented budgets⁴ as well as for the ECD, Forest Department (FD), and the Nature and Wildlife Conservation Division (NWCD) (Emerton and Kyin 2017).

³ Union budget refers to the union ministries and departments only (including transfers to states and regions).

⁴ The review does not cover the state economic enterprises associated with MONREC or mining-related receipts and expenditures. It looks only at conservation-oriented MONREC departments (including their component divisions and other units) and the union minister's office.

Figure 5

MONREC budget allocations from 2010/11–2017/18

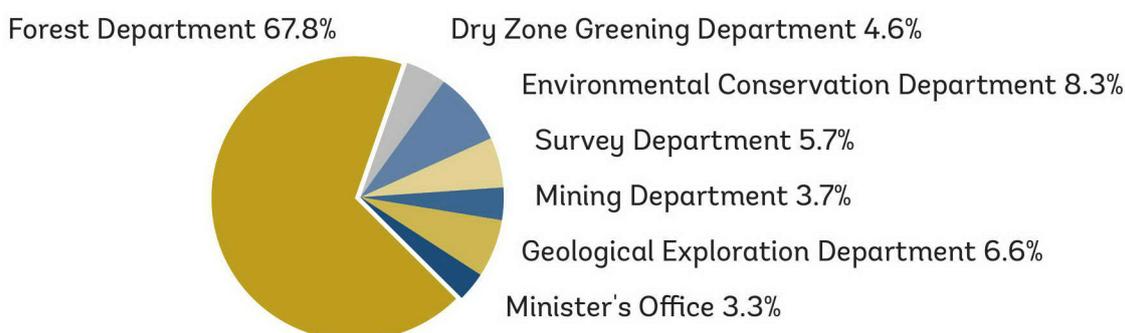


34. These expenditure reviews found that, after an unusually high allocation in the postelection year of 2010, conservation-oriented MONREC budgets have registered sustained growth. Expenditures had increased in real terms by around 70 percent to the end of 2016/17. A quick analysis of the World Bank Group-Ministry of Planning and Finance (MOPF) BOOST data set largely confirms the findings of the environmental expenditure reviews.⁵ Public budget allocations to MONREC departments⁶ have shown a steady increase since 2011.

35. There has also been little variation since 2011 in MONREC spending as a proportion of all general government spending (0.2–0.5 percent). With the exception of the ECD (which was only established in 2012 and has been steadily scaling up its operations and expenditures at central and state/region and district levels over the last five years), the relative share of MONREC budget allocated to different departments has remained fairly stable. The FD dominates expenditures at 68 percent of the total or constant 2018 US\$15 million⁷ for FY2017/18 (Figure 6). The ECD planned budget is just under US\$2 million, and other departments are projected to spend US\$1–1.5 million each.

Figure 6

Allocation of MONREC department budget 2017/18



⁵ <http://boost.worldbank.org/boost-data-lab>.

⁶ MONREC departments are analyzed separately from the Myanmar Timber Enterprise (MTE). This is because the MTE operates as a semiautonomous, semicommercial state-owned economic enterprise (SEE) and has a distinct function (harvesting, processing, and marketing of timber) as compared to the MONREC departments (coordination and delivery of government policy on ENR management). The size of MTE expenditures and receipts also dwarfs those of MONREC departments, while ongoing SEE reforms mean that MTE budgets have been undergoing substantial changes over recent years.

⁷ All U.S. dollar values referred to in this section are expressed at constant 2018 U.S. dollar, deflated using the consumer price index for that year and then converted at the 2018 exchange rate.

36. **External funding makes an important—although highly variable—contribution to ENR budgets.** For example, over the last decade, the amount of funding to environmental conservation provided by international development partners was approximately equal to that allocated from the public budget (Emerton and Kyin 2017). In total, between 2007 and 2015, some US\$125 million of official development assistance was marked with environment as the 'principal objective'. This amount has increased over time, although it fluctuates widely between years and across different ENR subsectors. The share of the total official development assistance in Myanmar allocated to environmental spending has remained relatively constant, at 1–2.5 percent of the total amount.

1.5 Limited Budget and Funding for EIA System, Monitoring, and Compliance

37. Additional budget will be required for the ECD to effectively increase staffing levels and technical capacity and to set up district and township offices. Additional resources, equipment, and information systems are needed for the EIA Division and Pollution Control Division (PCD) to effectively review and approve EIAs/IEEs/EMPs and to carry out inspection, monitoring, and audits on the ground. There is a need to secure enough public and private finance to address these threats, to sustainably manage the natural environment, and to support Myanmar's sustainable development (UNDP and WWF 2018).

38. Recognizing these urgent needs and priorities, MONREC is currently in the process of setting up the Environmental Management Fund (EMF). The EMF is mandated by the ECL (2012) and Environment Conservation Rules (ECR) (2014). To support this work, the NECCCCC authorized the ECD to lead a Fund Preparation Working Group. WWF and United Nations Development Programme (UNDP) function as technical assistance partners to this process. Currently, there are three distinct sources of potential revenue namely

- (a) **Compensation from polluters for environmental impacts.** Under Subsection (o) of Section 7 of the ECL and Section 30 of the ECR (2014);
- (b) **Contributions from organizations that obtain benefits from natural environmental services.** This latter category can be identified as payments for ecosystem services (PESs); and
- (c) **Receipts from MONREC for carrying out its duties relating to environmental conservation.** Article 31 of the ECR (2014).

39. Related to the third point, the EIA Procedure (2015) established a number of fees and charges that can be collected by the ECD, including fees for

- Applications to register as an EIA consultant (Article 18),
- Service fees for reviews of IEE and EIA Reports (Articles 37 and 64),
- Services for reviews of EMPs (Article 77),
- Compensation to the ministry for conducting compliance inspections under the terms of a project's Environmental Compliance Certificate (ECC) (Article 91(o)), and
- Penalties for breaches of a project's Prior Permission issued in accordance with Article 21 of the ECL (2012) and Article 25 of ECR (2014).

40. **These are potentially significant sources of funding that could be used to improve the implementation of the procedure and environmental inspection and monitoring (Schulte and Baird 2018).** Currently, only limited funds have been used to pay for third-party review, but there is certainly more scope to generate increased revenue to support environmental conservation and activities related to EIAs/IEEs/EMPs.



photo: ©Rory Hunter

2

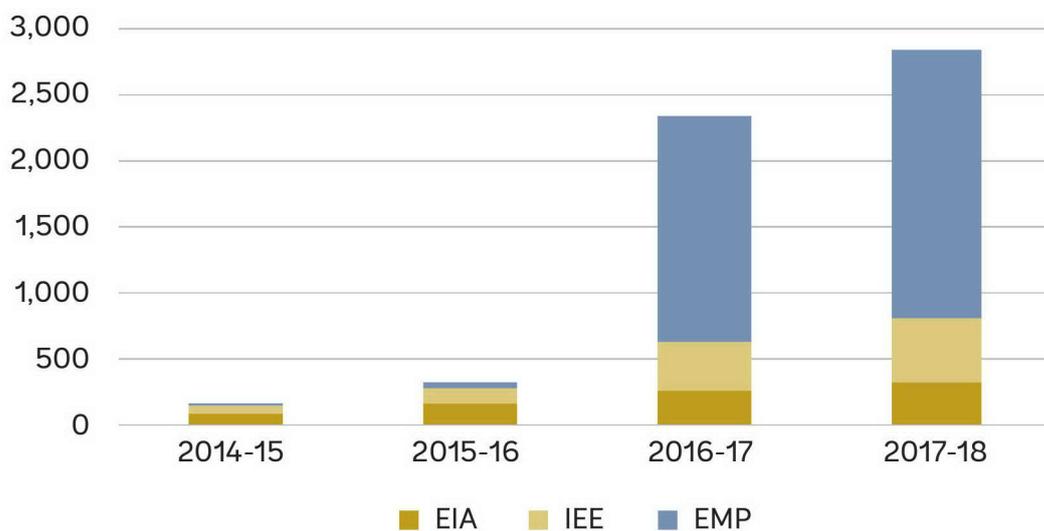
KEY CHALLENGES AND ISSUES

2. KEY CHALLENGES AND ISSUES

41. The number of EIAs/IEEs/EMPs submitted is increasing every year, with a significant increase of EMPs in 2016/17 and of all reports in 2017/18 (Figure 7). A total of 2,783 reports were submitted as of January 31, 2019. A breakdown of submissions by sector shows that a high proportion of these reports is for the mining sector (which can be largely explained by the licensing requirements for mining operations). While nearly all reports have been replied to⁸ (89.6 percent in total), only a small fraction has been approved (6.9 percent).

Figure 7

EIA/IEE/EMP received from FY2014/15 to FY2017/18



42. There has been a significant increase in the number of reports that have been responded to between June 2018 and January 2019, with the number of responses exceeding the intake of reports, significantly reducing the backlog of reports awaiting the ECD response. However, this focus needs to turn to approvals and then monitoring, inspection, and compliance.

43. The following section provides an overview of the status of EIAs/IEEs/EMPs submitted and then highlights the key challenges and issues of the Myanmar EIA system.

⁸ 'Replied to' means the EIA Division has completed the administrative review and issued comments to the project proponent.

2.1 Status of EIAs/IEEs/EMPs Submitted

44. In February 2019, the ECD provided statistics to development partners on the status of EIAs/IEEs/EMPs. These data include information on the number of reports received, replied to, and approved as of January 31, 2019 (Table 6). Overall, the ECD has made good progress in the total number of reports replied to; this means that the administrative review has been completed by the EIA Division staff and the required changes have been officially communicated to project proponents.

45. In total, 89.6 percent (2,494) of the reports have been replied to; this includes 93.6 percent (1,845) of EMPs, 86.5 percent (454) of IEEs, and 67.9 percent (195) of EIAs. In terms of approval, only 6.9 percent (192) of all 2,783 reports submitted have been approved, leaving 250 EIAs, 482 IEEs, and 1,859 EMPs awaiting approval as of January 31, 2019.

Table 6

EIAs/IEEs/EMPs received as of January 31, 2019

Type	Total received	Total replied	Replied (%)	Total approved	Approved (%)	Total awaiting reply	Total awaiting approval
EIA	287	195	67.9	37	12.9%	92	250
IEE	525	454	86.5	43	8%	71	482
EMP	1,971	1,845	93.6	112	5.7%	126	1,859
Total	2,783	2,494	89.6	192	6.9%	289	2,591

Source: ECD 2019

46. From May 2018, the ECD has committed significant staff and resources to address the backlog of EIAs/IEEs/EMPs, especially for the mining sector. Many staff officers have been assigned from state/region ECD offices and other ministries and departments to review EMPs in the mining sector, including the Ministry of Industry (MOI), FD, and the DZGD. To measure this progress, the EIA/IEE/EMP data above were compared with data provided by the ECD on September 24, 2018 (Table 7). Although there are some discrepancies in the data, they show that 406 EMPs, 182 IEEs, and 62 EIAs were replied to from September 2018 to January 2019. This is a significant achievement, and now the focus needs to turn to approving EIA/IEE/EMP reports, as well as ensuring that incoming reports are reviewed.

Table 7

Comparison of EIA/IEE/EMP data from September 24, 2018 to January 31, 2019

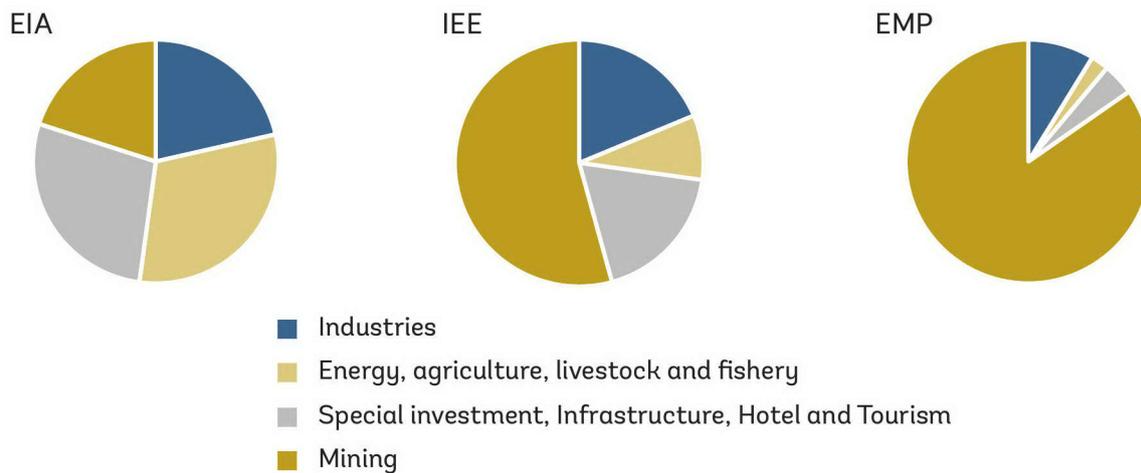
Activity	September 2018			January 2019			Progress		
	EIAs	IEEs	EMPs	EIAs	IEEs	EMPs	EIAs	IEEs	EMPs
Received	294	514	1,715	287	525	1,971	-7	11	256
Replied	133	272	1,439	195	454	1,845	62	182	406
Approved	34	38	108	37	43	112	3	5	4

2.1.1 Sector and Industry

47. A large majority of the reports submitted to date are for the mining sector. The data provided by the ECD as of January 31, 2019 also include a breakdown by four key sectors: (a) industries; (b) energy, agriculture, livestock, and fishery; (c) special investment, infrastructure, hotel, and tourism; and (d) mining (Figure 8). The breakdown of EIAs/IEEs/EMPs received by sector is shown in Figure 8.

Figure 8

Status of EIAs/IEEs/EMPs by sector



48. Mining accounts for 72.2 percent (2,010) of the total reports submitted, including 84.7 percent (1,669) of all EMPs submitted, 54.1 percent (284) of IEEs, and 19.9 percent (57) of EIAs. This is due to several EMPs being submitted for existing mining operations in FY2016/17. At the time, it was estimated that 48 percent of the mining reports were from the gemstones and jade sectors. This was a result of the introduction of the EIA Procedure (2015), Mines Law Amendments (2015) and Mines Rules (2018) as well as the mining license renewal process. Mining licenses in Myanmar are renewed every four years, and, to comply with the EIA Procedure and Mines Rules, existing mines were required to develop and submit stand-alone EMPs (and in some cases IEEs) to be granted a new mining license. These requirements have resulted in an influx of poor-quality EMPs and IEEs. This is explored further in Section 2.5.

49. The data in the 'Future Action Plan on Reviewing Environmental Impact Assessment Reports' prepared by the ECD in June 2018 had a more detailed breakdown on the status of EIAs/IEEs/EMPs by sector as of May 31, 2018 (Table 8). These are the sectors specified in Annex 1 of the EIA Procedure (2015).

Table 8

EIAs/IEEs/EMPs received by sector as of June 2018

Sector	EIA	IEE	EMP	Total
Special Investment Projects	9	2	1	12
Energy Sector Development	85	35	39	159
Agriculture, Livestock, and Forestry Development	2	0	13	15
Manufacturing	83	81	114	278
Waste Management	0	0	1	1
Water Supply	2	0	3	5
Infrastructure and Service Development	59	65	30	154
Transportation	12	11	8	31
Mining	71	289	1,815	2,175
Economic Activities	0	4	8	12
TOTAL	323	487	2,032	2,842

50. Again, there are discrepancies in the reported total number of EIAs/IEEs/EMPs received in June 2018 when compared to the data for September 2018 and January 2019, which need to be verified. Mining accounted for 76.5 percent (2,175) of all reports submitted, including 89.3 percent (1,815) of EMPs, 59.3 percent (289) of IEEs, and 22 percent (71) of EIAs.

51. Although the EMP data are dominated by the mining sector, there is a more even spread of sectors for EIA and IEE reports, as shown in Figure 9 and Figure 10. In summary, 26.3 percent (85) of EIAs received are for energy sector development, 25.7 percent (83) for manufacturing, 22 percent (71) for mining, and 18.3 percent (59) for infrastructure and service development; 59.3 percent of IEEs received are for the mining sector, 16.6 percent (114) for manufacturing, and 13.3 percent (65) for infrastructure and service development.

Figure 9

EIAs received by sector from 2011/12 to 2017/18

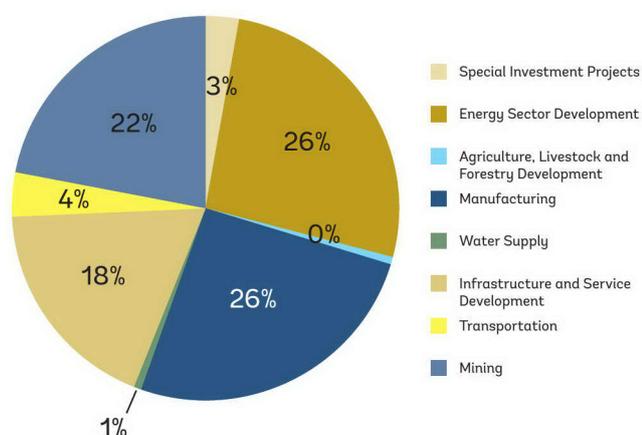
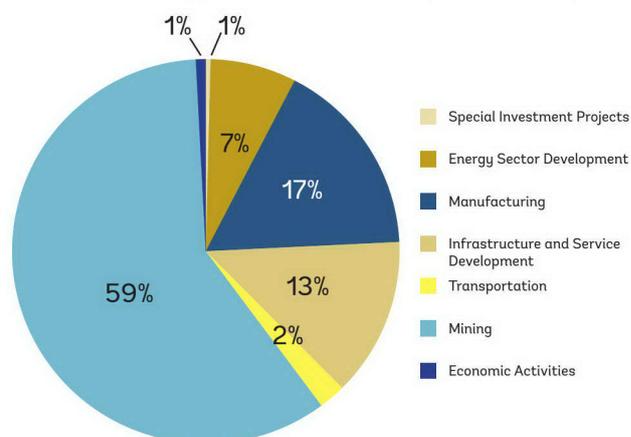


Figure 10

IEEs received by sector from 2011/12 to 2017/18



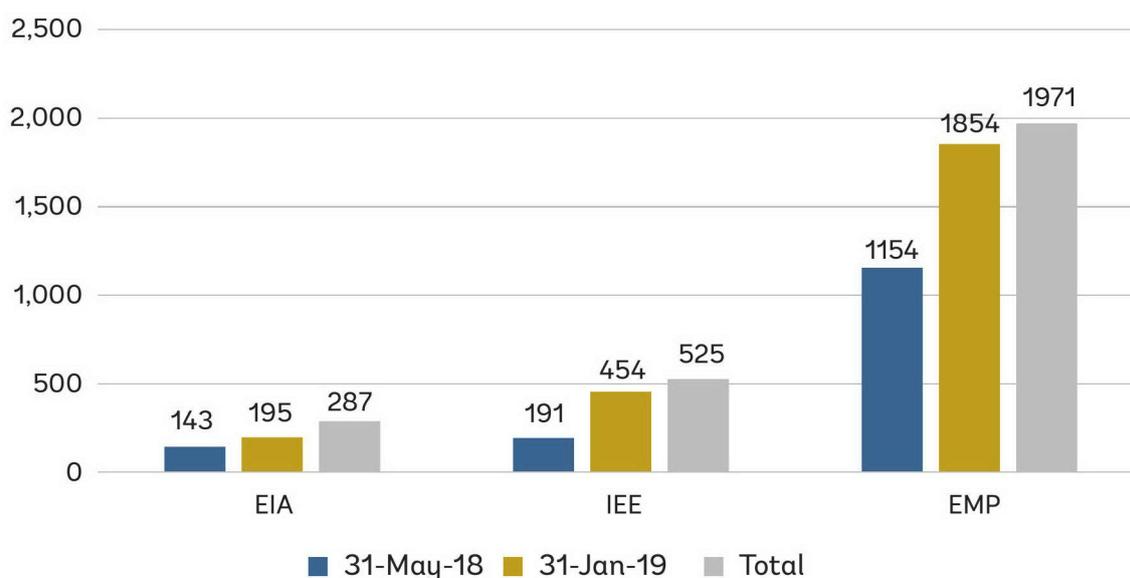
2.1.2 Progress in Review of EIAs/IEEs/EMPs in the Period from June 2018 to February 2019

52. Comparing the number of EIAs/IEEs/EMPs replied to from January 31, 2019 to May 31, 2018 also shows the progress that the EIA Division has made in reviewing reports and replying to project proponents. Unfortunately, there were no data provided on approvals, and there are discrepancies between the total numbers reported for received EIAs/EMPs (the number of reports received should not decrease, unless they have been recategorized, duplicated, or removed from system). This makes it difficult to determine the number of new EIAs/IEEs/EMPs that were submitted between June 2018 and January 2019.

53. In this period, the total number of reports replied to has increased from 52.2 percent (1,488) to 89.6 percent (2,494), including EIAs increasing from 44.3 percent (143) to 67.9 percent (195), IEEs from 38.4 percent (191) to 86.5 percent (454), and EMPs from 56.8 percent (1,154) to 93.6 percent (1,854) (Figure 11). In summary, 36 percent (1,006) of documents were reviewed and replied to between June 2018 and January 2019: 52 EIAs, 263 IEEs, and 691 EMPs.

Figure 11

Comparing EIAs/IEEs/EMPs replied to from June 2018 to February 2019



2.2 Delays in Initial Review of EIAs/IEEs/EMPs

54. This section summarizes the key issues contributing to delays during initial key steps of the EIA Procedure (2015): (a) screening, (b) scoping, and (c) administrative review. These results are based on the analysis of EIA/IEE/EMP data provided by the ECD and through interviews and surveys, which are summarized in Annexes 2–4.

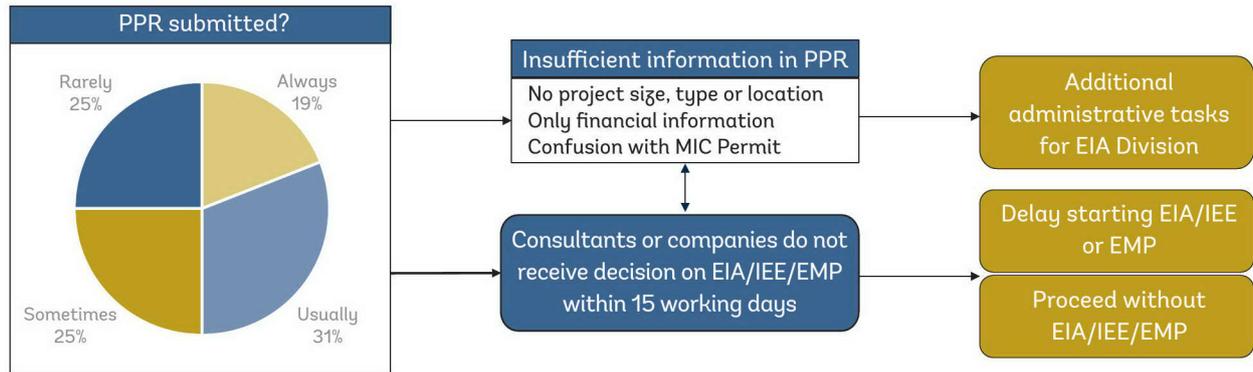
55. The ECD does not currently have an effective and transparent mechanism for tracking the submission of EIAs/IEEs/EMPs. All stakeholders called for an online system to improve tracking and workflow for the ECD, communication with project proponents on review and approval, and disclosing reports and information to the public. With regard to post-EIA submission, there is no system that links the approval of documents with monitoring and compliance.

2.2.1 Screening

56. In contravention to the requirements of the EIA Procedure, project proponents are not always submitting a Project Proposal Report (PPR) to the ECD, and the ECD is not making a decision within 15 working days. This can lead to (a) more administrative tasks for the EIA Division, (b) delay in starting the environmental assessment, or (c) projects proceeding without an EIA/IEE/EMP in the planning stages (Figure 12).

Figure 12

Current issues with the screening process



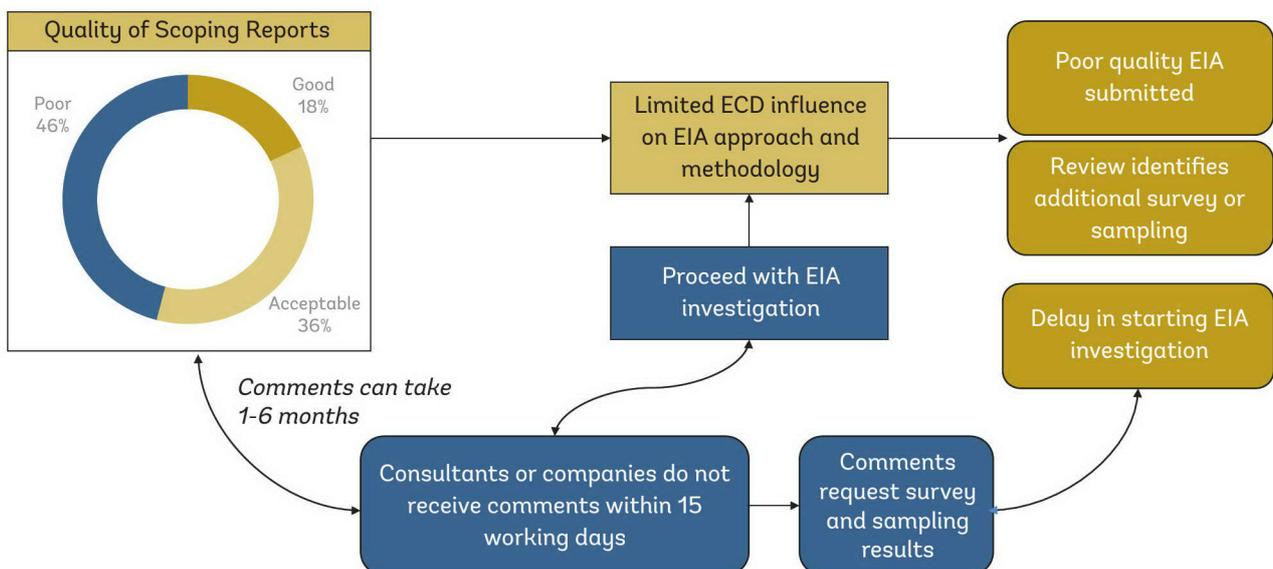
Note: MIC = Myanmar Investment Commission.

2.2.2 Scoping

57. Project proponents submitting poor-quality scoping reports and delays in the ECD responding mean the EIA investigation is delayed or proceeds without guidance from the ECD on the approach and methodology for the investigation. This can lead to poor-quality EIA reports, and the EIA Division or the review team may request additional sampling or surveys is done after the EIA investigation has been completed (Figure 13).

Figure 13

Current issues with the scoping phase



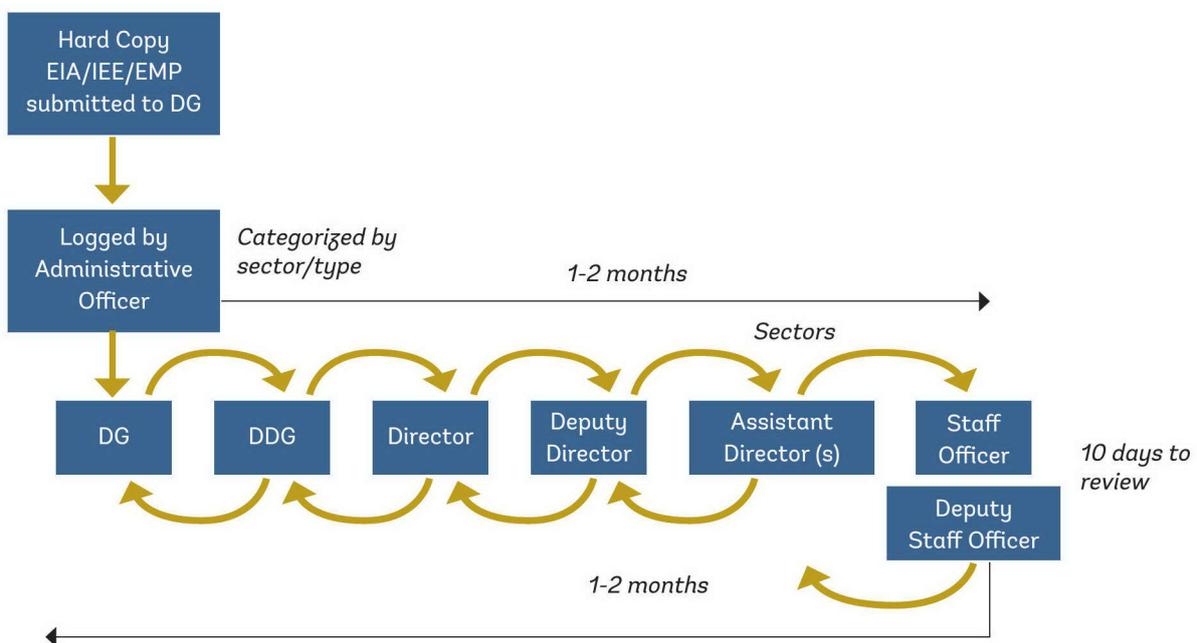
2.2.3 Administrative Review

58. Companies and consultants reported the time taken to complete the administrative review⁹ (Figure 14) as the main cause of delay in the EIA system.

59. If the ECD does not adhere strictly to the timelines for issuing decisions and comments, this can delay investments or lead to projects starting without an EIA/IEE/EMP in place. If guidance on the PPR and scoping report is not provided within the time frame, the EIA investigations go ahead without any guidance and agreement from the ECD on the approach and methodology. There are projects that have proceeded without approval from the ECD and are under construction or operating without an ECC or Approval Letter.

Figure 14

Process flow for administrative review



2.2.4 Role of State/Region ECD Offices in Review of EMPs

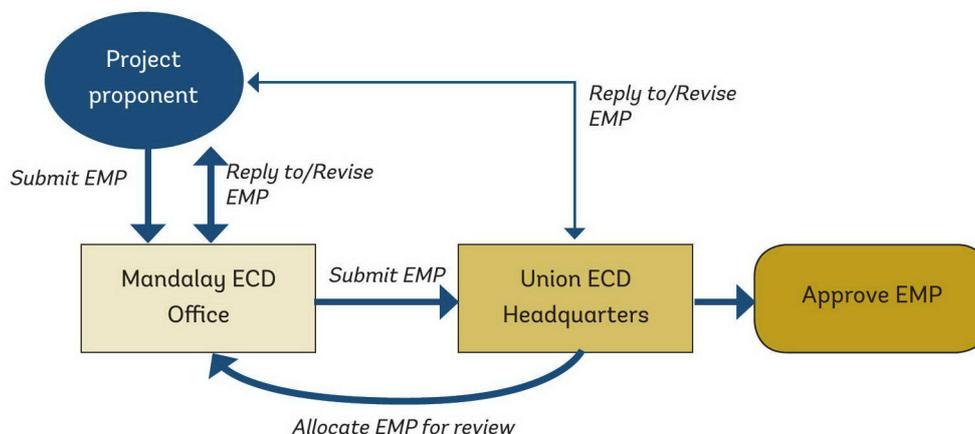
60. Recently, the EIA Division staff at the state/region ECD offices have assumed responsibility for the initial review of EMP, and these reports are received in the following two ways:

- (a) The proponents submit the EMPs directly to the state/region ECD office.
- (b) The union-level ECD also sends EMPs from other states/regions to assist in review.

⁹ The EIA Division staff are responsible for undertaking the administrative (or initial) review of the EIA report. The submitted report can take around 1-2 months to reach the staff officer responsible for review and another 10 days to review. Following review, the report can also take 1-2 months to reach the DG office before issuing comments to the project proponent.

Figure 15

Process flow for receiving and reviewing EMPs at the state/region level



61. The second measure was introduced for states/regions to assist with the backlog of EMPs received. There seem to be some issues with this process, as once the state/region ECD office reviews the project/replies to project proponent, the revised EMP is then sent to the union level for final approval (Figure 15). Both state/region and union levels may 'reply to' and request additional information from the proponent leading to potential delays in the approval of the EMP.

62. In some cases, during the scoping and EIA investigation process, the ECD headquarters request the state/region ECD offices to go to sites and check the situation on the ground. The state/region offices also assist the project proponents in following the procedure in relation to public consultation. In the future, it is likely that the mandate will be extended for the state/region offices to do the initial review for both the EMP and IEE.

2.2.5 Third-party review of EIA / IEE / EMP

63. The third-party (or independent review) review of EIAs/IEEs/ EMPs and the preparation of ECCs or approval letters has been funded:

- (a) Directly by ADB, UNDP, VLS, NEA, JICA and others to provide independent review.
- (b) Through the mechanism in the Procedures which allows for project proponents to pay for 3rd party review.

64. Companies reported that they have mainly used the third-party review mechanism for energy development and oil and gas projects, and the process has led to more efficient EIA review and approval. However, companies and consultants reported that a more transparent approach is needed to determine the costs and payment schedule of third-party review. To date, only one firm has been contracted to do third-party reviews, leading to concerns around conflict of interest. For example, the company contracted for third-party review is also a registered E&S consultancy firm.

65. All stakeholders agreed that that a permanent panel of independent reviewers is needed in the short term to assist ECD with the review of EIA/IEE, but in the longer term ECD should have to capacity to review

and approve EIA. The governments of Lao People's Democratic Republic (PDR) and Vietnam have established independent review panels as part of their EIA system (Sano et al. 2016). Clear principles and guidelines are needed in Myanmar prior to setting up the third-party review panel to inform payment, timing and allay fears around the conflict of interest and transparency.

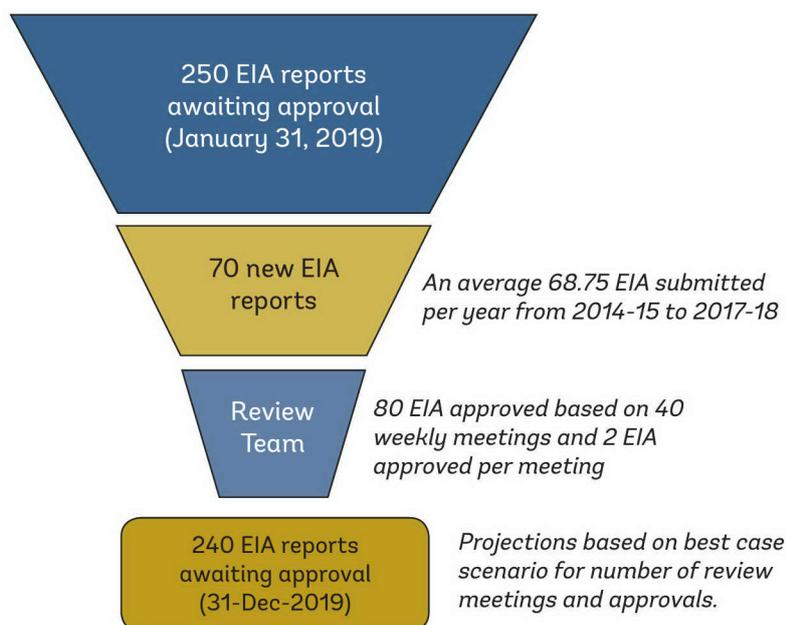
2.3 Delays in EIA Approval and ECC Issuance

66. According to the data provided by the ECD as of January 31, 2019, only 37 out of 287 EIAs (or 13 percent) submitted had been approved. As of June 2018, fewer than 10 ECCs had been approved and issued by the ECD.

67. Most ECCs have been prepared with support from development partners, and staff reported that the ECCs are difficult to prepare in understanding both the E&S conditions and the legal requirements. Although some ECCs have been made public by the project proponents, the ECD has not disclosed any on its website (Schulte and Baird 2018). Development partners are currently working in support of the ECD to simplify the ECC template.

Figure 16

Projections for EIA approval status by December 31, 2019



68. If all the EIAs go to the EIA review team for approval, then it will not be possible to approve the current EIAs in the system at the current review pace, especially taking into account the submission of new reports. Figure 16 shows that even under a best-case scenario, it would only be possible to reduce the EIAs awaiting approval from 250 to 240 reports by December 2019. This projection makes the following assumptions: (a) 70 new EIAs submitted in 2019, (b) 40 weekly review teams are held in 2019,¹⁰ and (c) two EIA reports are approved at every meeting. The third assumption is less realistic as in many cases, multiple review team meetings are needed for some EIA reports.

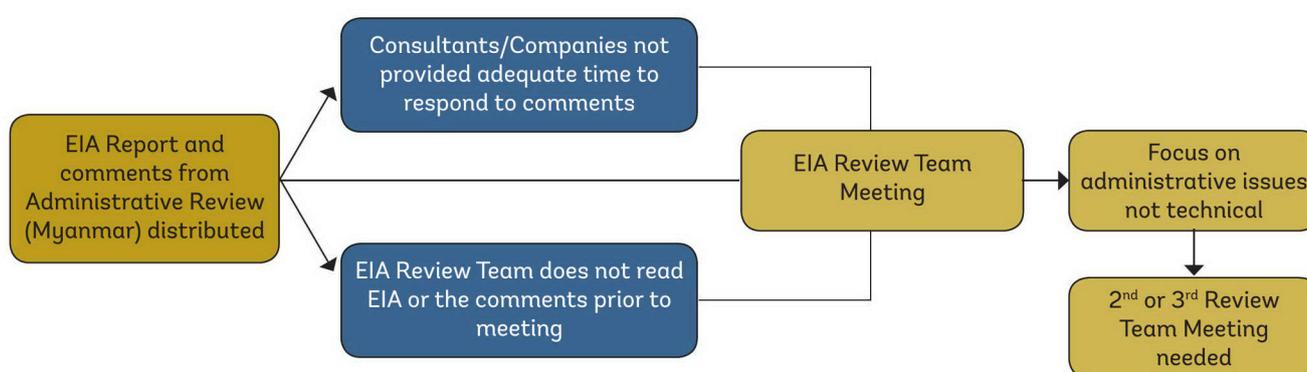
¹⁰ These assumptions are based on averages in FY2014/15–FY2017/18.

69. All stakeholders reported that the review team members are not well prepared and do not read the EIAs before meetings; as a result, the meetings focus on administrative issues and not technical matters. The sectoral ministries often focus on small points related to legal and other requirements, not the key impacts and risks of projects. Companies and consultants are often only provided 1–2 days notification of the meeting. Issues with the EIA review team process is summarized in Figure 17.

70. There is an urgent need to streamline the EIA review team process and design a risk-based screening system for all incoming reports based on risk, investment volume, complexity, or political sensitivity. The authority for approvals will also need to be delegated to deal with the current EIAs/IEEs/EMPs in the system on time.

Figure 17

Issues with EIA review team process



71. The main issue with the ECCs not being issued is that there is no mechanism in place to trigger the inspection, monitoring, and compliance activities. The emphasis on the approval of documents means that there is limited monitoring and achievement of environmental outcomes on the ground. In future, a system is needed that links the approval of EIAs/IEEs/EMPs with the post-EIA inspection and monitoring to be carried out by the PCD. Companies are also required to submit six-monthly compliance reports.

2.4 Limited Capacity of ECD to Review EIAs/ IEEs/EMPs

72. All stakeholders recognized that the EIA Division has limited technical capacity and resources to effectively review EIAs/IEEs/EMPs. The EIA Division staff indicated that more specialist knowledge needs to be developed (for example, biodiversity, hydrology, socioeconomic, and aquatic ecology) and a team approach could be adopted to review reports. Development partners have invested in improving the capacity of the EIA division staff through training programs and development of EIA guidelines. However, these efforts need to be scaled up to ensure that new staff and the state/regional ECD offices have adequate capacity.

73. Most of the EIA Division staff strongly agreed that the training had improved their capacity to review EIAs/IEEs/EMPs. The staff had participated in various seminars/workshops, EIA clinics (one-on-one coaching), and certified training courses. Training had been provided on EIA review and approval, sector-specific EIA guidelines, inspection and monitoring, social impact assessment (SIA), biodiversity, and public participation. The following additional training needs were highlighted by staff:

- SIA and public participation
- Training on EIA process, that is screening, scoping, and EIA investigation
- Risk and impact analysis, baseline data collection, and review and approval of EIA
- Industrial, infrastructure, manufacturing, and other sectors
- Interpreting modeling results for water, air, noise, groundwater, and other indicators
- Biodiversity and aquatic ecology.

74. The EIA division staff and consultants had used the EIA guidelines and found them useful for preparing or reviewing the EIAs/IEEs/EMPs. The staff indicated that more templates/checklists are needed; they also indicated that additional guidelines should be prepared for manufacturing, special economic zones (SEZs), industry, and infrastructure. Consultants recommended preparing additional sector guidelines (for example, energy sector, power plants, and factories), including specific guidance on sampling, design of the EIA process, impact and risk assessment, and SIA.

2.5 Inadequate Quality of EIAs/IEEs/EMPs Submitted

75. The backlog of reports can be attributed partly to the limited staffing and capacity of the ECD to review a large number of EIAs/IEEs/EMPs in a short time. However, the staff also has had to deal with a constant stream of documents that are largely inadequate due to the poor impact and risk assessment resulting in deficient EMPs and mitigation measures. The results of the survey in relation to both the quality of reports submitted and response time are summarized in Table 9.

Table 9

Quality of EIAs/IEEs/EMPs and typical delays in response time

Report	Quality of report submitted (from EIA Division Survey)	Requirement of EIA Procedure (2015)	Response time (reported by companies and consultants)
PPR	PPR is not always submitted or has limited information.	Decision on whether an EIA/IEE/EMP is required within 15 working days.	Responses usually take between 45 and 60 working days.
Scoping report for EIA	46% of staff reported that scoping reports were of poor quality.	Provide comments within 15 working days.	Responses usually take between 30 and 90 working days.
EIA	54.6% of staff reported poor quality, 36.4% reported acceptable quality, and only 9.1% reported good quality.	ECD to provide comments within 90 working days.	Responses usually take between 150 and 240 working days.
IEE	No staff reported very good or good quality, 37.5% reported acceptable quality, 56.3% reported poor quality, and 6.3% reported very poor quality.	ECD is required to issue a decision within 60 days.	Responses usually take between 90 and 210 working days.
EMP	66.7% of staff reported that EMPs were acceptable, 25% poor, and 8.3% very poor.	ECD is required to issue a decision within 30 working days	Responses usually take between 60 and 180 working days.

76. As highlighted by stakeholders, there is no system to reject poor-quality EIAs/IEEs/EMPs quickly. Instead, all reports must be reviewed. Thus, instead of rejecting incomplete reports immediately, the EIA Division has to spend time preparing a detailed set of comments, pass recommendations to the review team, and then hold a negotiation between the review team and project proponent/environment and social consultant on actions required for improving the report.

77. In some cases, companies are not allocating sufficient budget or timelines for consultants to prepare an EIA/IEE that complies with the EIA Procedure or international best practice. Through consultations for the review, it was revealed that E&S consultants are agreeing to prepare EIAs/IEEs/EMPs at a very low cost and, as a result, are producing low-quality EIA reports. Worryingly, the Directorate of Investment and Company Administration (DICA) 'Cost of Doing Business Survey' (2018) estimated that the costs for doing research for an EIA/IEE ranged from a minimum of US\$20,000 or less to a maximum of US\$100,000 or more, depending on the level of assessment and the size of the project. This would not be sufficient for conducting an EIA for a large-scale project, as this cost should reflect the level of investment, risk, and complexity.

78. Although there are limited quantitative data on the quality of EIA submitted, the studies below have used international evaluation criteria to attempt to measure the quality.

79. An evaluation of review of a sample of 10 EIA reports in 2017/18 found that seven of the EIA reports assessed against international criteria were poor in identification and evaluation of key impacts, while five had weaknesses in the mitigation and monitoring aspects (Thu 2018). The quality of EIA reports prepared by the Myanmar E&S consultants has often failed to meet the minimum requirements.

80. Due to the level of Chinese investments in the mining, oil and gas, and hydropower sectors, another desktop review was undertaken of 10 EIAs submitted between 2010 and 2017 and the EIAs for three large-scale projects: (a) Letpadaung Copper Mine, (b) Sino-Myanmar Pipeline, and (c) Myitsone dam (Aung, Shengji, and Condon 2018). A review of the 10 EIAs submitted by Chinese companies from 2010 to 2017 revealed that

- Only three of the reports sampled were of a satisfactory quality, four were unsatisfactory, and three were borderline and
- The main deficiencies include the identification of key impacts with failure to apply a systematic (or internationally recognized) methodology to assess the significance of impacts.

81. Another assessment of gender in the EIA process for the Upper Paunglaung hydropower dam, Letpadaung Copper Mine, Thilawa SEZ, and Myitsone hydropower dam found that special efforts to include women in public participation have not been made (Spectrum 2018). Addressing gender-specific issues in impact assessment processes requires specialized engagement techniques for the inclusion of women, as well as minority groups and vulnerable people. These groups are particularly prone to experiencing greater impacts of large-scale projects and resettlement processes than others (Oxfam 2013).

82. Companies, consultants, and development partners involved in this review are committed to improving the quality of the EIA. There is a need to promote awareness of the procedure to the private sector, so they are aware of their responsibilities, and to explain the process, the costs, and time needed to prepare a satisfactory EIA report. For consultants, the Myanmar Environmental Assessment Association (MEAA) is aiming to develop a code of ethics to improve the quality of EIA reports.

2.6 Influx of Poor-quality EMPs in the Mining Sector

83. As discussed in Section 2.1, mining accounts for 72.2 percent (2,010) of the total reports submitted. Most of these stand-alone EMPs were submitted in 2016/17. Under Article 8 of the procedure, existing enterprises should submit EMPs. In 2016, when the Department of Mines (DOM) was incorporated into MONREC, the ECD issued a guidance requiring all existing mines to submit EMPs. This decision led to a significant volume of EIAs/IEEs/EMPs requiring review and approval.

84. There is a need to improve ESSs in the mining sector. The rapid expansion of mining has created significant E&S problems, including poor occupational health and safety, farmland appropriation or contamination, erosion and soil loss, deforestation and biodiversity loss, and water and land pollution (HIC 2017). Gold mining, for instance, involves the use of mercury or cyanide. Analysis of remote sensing data suggests that mining has expanded rapidly within Myanmar. Much of this expansion is in Kachin, Mandalay, and Sagaing (Figure 18). From 2002 to 2014, mining is estimated to account for 46,000 ha of forest loss, almost all of it in Kachin, Sagaing, and Mandalay (Connette et al. 2016).

85. A specific template was designed for the stand-alone EMP for the mining sector, comprising the following sections: Executive Summary, Project Description, Maps and Layout Plan, Policy and Legislation, Existing Environment, Impact and Mitigation Measure, Emergency Plan, Public Consultation, Monitoring and Budget Allocation, Corporate Social Responsibility, and Mine Closure Plan. These requirements are much stricter than the requirements for EMP under Article 62 of the procedure and would require experience and expertise to develop. As reported by the EIA Division and DOM during surveys, most of the EMPs were prepared by former officials from the mining sector with limited or no experience with EIAs/IEEs/EMPs.

86. Additional staff from the states/regions and other ministries have been brought in and are working solely on reviewing these EMPs which is putting a strain on the ECD's resources. The EMPs or IEEs are often submitted directly from the DOM (Mining Enterprise No. 1 or No. 2) or Myanmar Gem Enterprise (MGE), so ECD reviewers are often not coordinating directly with the project proponent.

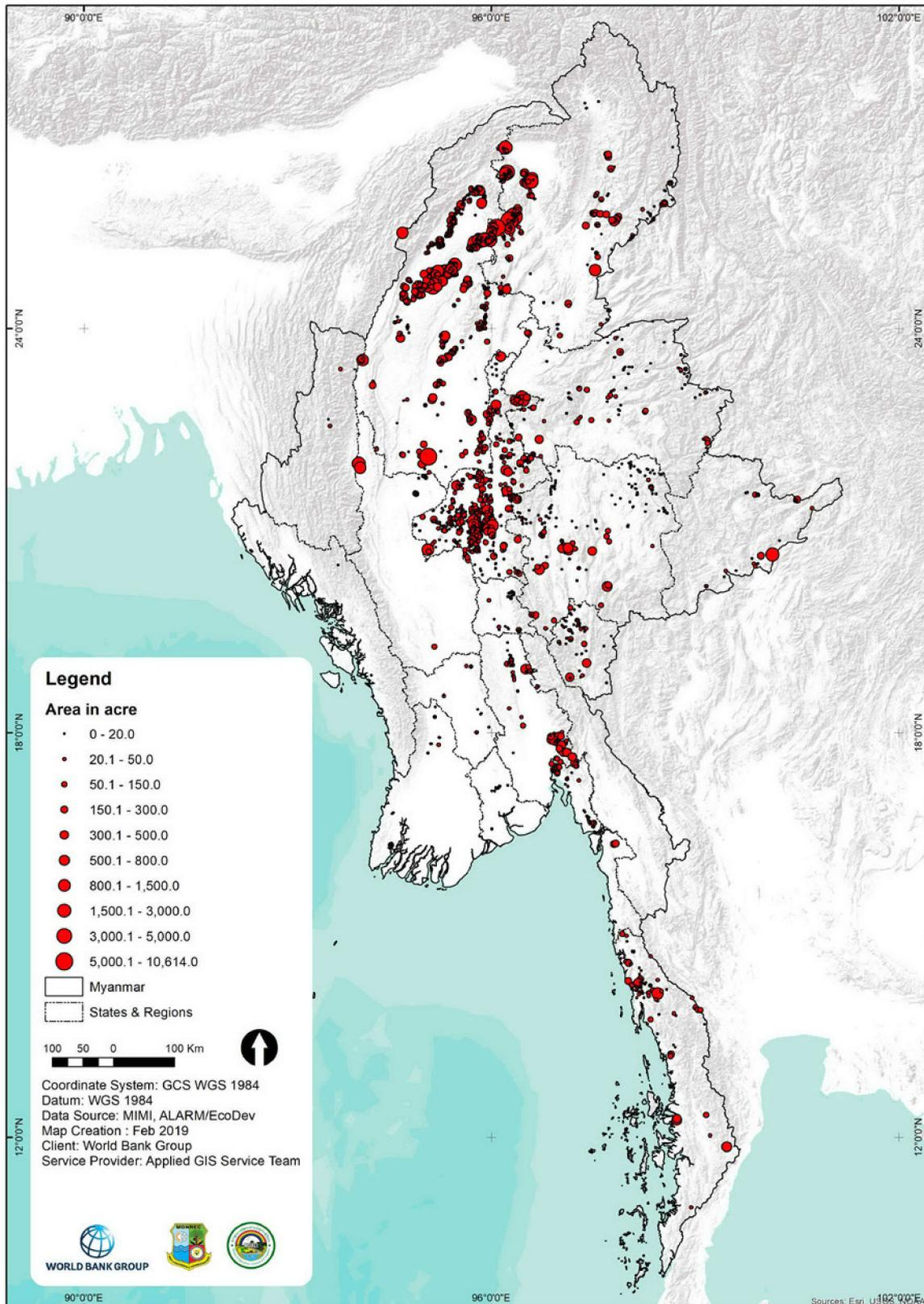
87. In the mining sector, there is confusion over the role of the stand-alone EMP and a lack of clarity as to which government agencies are responsible for inspecting and enforcing commitments in the EMPs and ECCs (or Approval Letters). The inclusion of detailed community development plans in the EMPs was questioned, as was the appropriateness of the ECD seeking to approve these, since they should be negotiated and agreed at the local level between the company and communities (MCRB 2018b).

88. The Mines Rules (2018) contain provisions mirroring those contained in the ECL (2012) and the EIA Procedure (2015). The Mines Rules (2018) also state that permit holders shall be responsible for all expenses relating to environmental conservation, foreseeing that proponents will establish an environmental conservation fund at a Myanmar state-owned bank, with the amount of contribution to be based on the relevant EMP for mineral exploration, mineral production, and/or mineral processing.

89. As of April 30, 2018, the DOM had issued a total of 1,405 valid mining permits, of which 150 were for large-scale, 469 for medium-scale, and 786 for small-scale mines (Charltons 2018). The rules require artisanal and small-scale mining (ASM) and small-scale operations to prepare an IEE; this requirement conflicts with the EIA Procedure and is challenging for local operators to comply with. The state/region governments are responsible for issuing permits for small-scale and artisanal mines; however, they do not understand the requirements for IEE or how to review the reports. Currently, the state/region ECD offices are only involved in the review of the EMPs. Examples of the environmental review and approval of ASM in India, Indonesia, Mongolia, and the Philippines are summarized in Table 10 (Bauer, Kirk, and Sahla 2018).

Figure 18

Estimated area of mining in Myanmar



Source: Connette et al. 2016.

Table 10

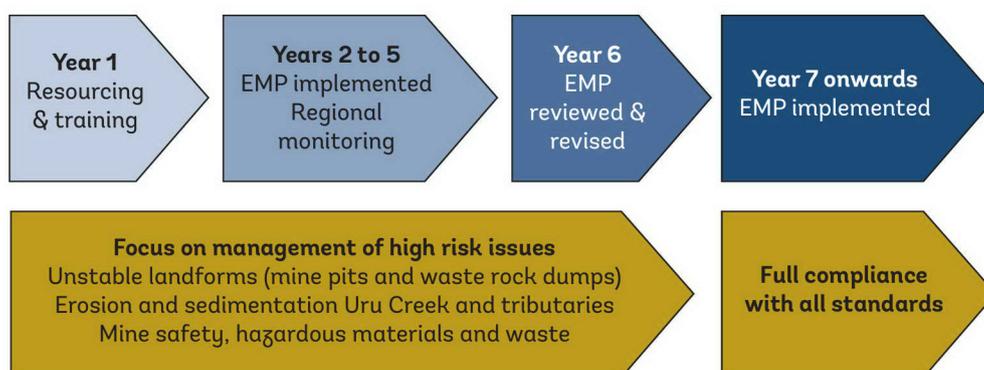
Environmental review and approval of ASM in India, Indonesia, Mongolia, and the Philippines

Country	Legislation	Description of relevant articles
India	EIA Notifications 2016 (as amended in January 2016)	Environmental clearances (ECs) for the mining of building materials (classified as 'minor' minerals in Indian legislation) on plots of less than 5 ha are issued by the District Environmental Impact Assessment Authority (DEIAA). ECs for all non-coal mining projects of less than 50 ha (Category B projects under EIA framework) are issued by the state DEIAA.
Indonesia	Environmental Permit Regulations, 2012; Environmental Protection and Management Law, 2009	District, province, and central governments are all responsible for assessing the EIAs and issuing certificates on projects situated within their jurisdictions. At each level, there is an EIA appraisal committee, where affected communities are represented.
Mongolia	Law of Mongolia on Environmental Impact Assessment (as amended in 2011); Regulation on Extraction of Minerals from Small-Scale Mines (2010)	All EIA certificates, including for ASM, are issued by the central government. District governors have the responsibility to evaluate the rehabilitation measures and to manage environmental restoration funds held under the EIA law.
Philippines	Implementing Rules of the Small-Scale Mining Act of 1991 (RA 7076)	An ECC is required for small-scale mines and is issued by the Department of Environment and Natural Resources (DENR) regional executive director. The regional executive director is appointed by the central DENR office.
	Local Government Act, 1991	Prior consent from municipal governments is required for all projects with potential negative environmental impacts.

90. Consultant firms, Coffey and Valentis, were engaged to prepare the EMPs for 10 zones in the Hpakan/Lonking Gems Tract to limit impacts from mining. The EMPs aimed to introduce best practice measures, clearly describe regulatory requirements for jade mining, and improve the E&S performance of jade mining. Importantly, this project also identified the need for the EMPs to be (a) implementable—mining company has the skills and financial capacity to implement and (b) enforced—the MGE and ECD have the capacity and resources to monitor compliance with the EMP. An ongoing and long-term approach is needed to improve E&S performance in small-scale and ASM mining as shown in Figure 19.

Figure 19

Approach to improving E&S performance in ASM



Source: Coffey 2017.

91. The approach above demonstrates that around seven years are needed to achieve full compliance with all standards in the jade sector. A similar model is needed to improve E&S performance for ASM.

2.7 Lack of Capacity to Enforce Compliance of Factories and Other Sectors

92. In 2016, the Mandalay Regional Government mandated that 72 companies in Mandalay’s Industrial Zone II clean up the pollution in the rivers within six months or risk having their licenses suspended. As a result, each company agreed to pay MMK 700,000 each year for continual maintenance (Mark and Zhang 2017).

93. From 2016 to 2018, the JICA ‘Project for Capacity Development in Basic Water Environment Management and EIA System’ was implemented near industrial zones on the Hlaing River in Yangon and the Myitnge River in Mandalay. The analysis of 100 wastewater samples from factories in Yangon and Mandalay in 2017 revealed that 89 percent of the factories were not meeting the NEQ values for biochemical oxygen demand (BOD) and 64 percent were not meeting the values for chemical oxygen demand (COD). Sampling in the dry season (February 2018) revealed that water quality had deteriorated as indicated by high COD detected at some points and slightly elevated levels of oil and grease detected at all points.

94. In response, the ECD ordered factories in nine priority sectors (Notification No. 3/2018) to develop EMPs within 9–12 months.¹¹ The sectors included food and beverage, alcohol, pesticides, cement, textiles, foundries, tanning, pulp/paper mills, and sugar manufacturing (Table 11). The factories raised concerns that they would not be able to comply due to the limited resources and capacity for owners to develop EMPs.

Table 11

Nine priority sectors under the ECD Notification No. 3/2018

No.	Category	Scale	Time stipulated
1	Alcohol, wine, and beer production	>50,000 liters/day	12 months
2	Food and beverages processing	>10 tons/day	9 months
3	Pesticide manufacturing, formation, and packaging plants	All sizes	9 months
4	Cement and lime manufacturing	Cement >10 tons/day Lime >20 tons/day	9 months
5	Textile and dyeing facilities	>1 ton/day	12 months
6	Foundry industry: 1. Base metal smelting and refining plant 2. Manufacture of pig iron, raw and low alloy steel from iron ore of scrap metal 3. Foundry 4. Nonferrous metal melting, smithy, and filigree	All sizes All sizes All sizes >50 tons/day	9 months
7	Tanning and leather finishing	All sizes	12 months
8	Pulp and/or paper mills	>20 tons/day	12 months
9	Sugar manufacturing plants	Production capacity >50 tons/day	12 months

¹¹ These assumptions are based on averages in FY2014/15–FY2017/18.

95. The MEAA convened a consultation meeting in June 2018 for the factories affected by the ECD Notification. The factories reported that it will not be possible for all factories to comply with emission guidelines. In consultations for the preparation of this CEA report, representatives of the industry association highlighted the need for the decision to consider economic growth, human resources, and capacity of the factory owners to implement EMPs and wastewater treatment measures. The industry association stressed the need for gradual change and more guidance from the ECD to prepare the EMPs.

96. The main concerns raised by the industry were that large industrial centers have the resources and budget to comply, but the small and medium enterprises (SMEs) are having trouble preparing the EMPs and setting up wastewater treatment systems. The ECD template for the EMP required factories to determine the impact of factories on air quality, issues related to solid waste treatment, wastewater, and noise and identify a monitoring plan, which they reported to be very challenging in a short time frame in a sector with limited experience in environmental management.

97. There was confusion in the garments sector when the notification was released on (a) how to comply and (b) whether it was going to be enforced. The EMPs developed for the garments sector are not effective in identifying the impacts and risks and do not include any monitoring. H&M and other buyers require factories to have good monitoring systems; however, there is limited to no experience of monitoring energy consumption, water use, and pollution in Myanmar. SMART Myanmar recommended that the ECD should develop a much simpler EMP framework for the garments sector and other factories, focusing on the key impacts, mitigation measures, and monitoring.

98. It was estimated that ECD Notification No. 3/2018 applied to 1,155 factories—as of February 2019, less than 10 percent of the factories had submitted EMPs. Assessing the recent data provided by the ECD, as of February 2019, only 171 EMPs had been submitted for ‘Industries’ (which includes factories), which is only 56 more than as of May 31, 2018. From the consultation with state/region ECD offices, the following number of EMPs for the nine sectors covered by ECD Notification No. 3/2018 had been submitted directly:

- Mandalay: 9 EMPs out of an estimated 200 factories
- Sagaing: 10 EMPs out of an estimated 46 factories
- Yangon: 15 EMPs out of an estimated 542 factories

99. While these figures are estimates only, they point to a serious noncompliance with the ECD notification. There is no doubt that the ECD needs to take action against the nine industrial sectors due to the risks they pose to water quality, air quality, and public health; however, a more consultative approach could have been taken to ensure achievable time frames were put in place. A six-month extension has been provided, allowing industries more time for compliance; it also provides the ECD the opportunity to set up a tracking mechanism and process for timely review of EMPs.

100. As with the example provided for ASM, improving E&S performance in Myanmar requires a more long-term approach, which is also recognized in the National Waste Management Strategy and Master Plan (2018–30). Support should be provided to the ECD to ensure that action is taken to ensure that factories do comply with the notification.

101. From the survey with state/region ECD offices in Mandalay, Sagaing, and Yangon, it was revealed that monitoring and inspection are usually undertaken in response to complaints by local communities. For example, the Mandalay ECD office inspects factories and cements plants, the Sagaing ECD office inspects the mining sector and sugar cane, and in Yangon, inspections are carried out with the DICA for 30 of the 600 enterprises registered with the Myanmar Investment Commission (MIC).

2.8 Applying the EIA Procedure to SEZs

102. Article 83 of the EIA Procedure (2015) states that an SEZ permit can only be granted to a developer after the issuance of an ECC. Some civil society organizations (CSOs) have criticized the SEZ Law (2014) for not conforming to international human rights law obligations, international standards for involuntary settlement, or the EIA Procedure (2015). CSOs have documented that people living on land acquired for the Dawei and Thilawa SEZ were displaced without proper planning for resettlement before the submission and approval of the EIA report. Earth Rights International (ERI) and other NGOs complained about the lack of public consultation for Thilawa SEZ and made a formal complaint to JICA which was the project financier. Similar issues have emerged in the preparations for the development of an SEZ in Kyaukphyu, Rakhine state (ICJ 2017).

103. To ensure the development of the Thilawa SEZ, in January 2015, a Presidential Office Letter No. 49 (1) was issued that assigned official permission for decision making and providing signature to assigned representatives at a One-Stop Service Center (OSSC) for all SEZs to

- Review/appraise Environmental Conservation and Protection Plan (E CPP);
- Make decision on the requirement of IEE and EIA depending upon the type of business; and
- Review and appraise the submitted EMPs, IEEs, and EIAs.

104. In December 2015, to fulfil these obligations, the ECD dispatched officers to the environmental section of the OSSC (ECD No. 101/2015) to review and appraise the submitted EIAs and EMPs. Concerns were raised by NGOs that the powers of the ECD under Article 22 of the EIA Procedure (2015) were devolved to a small team in a site-level OSSC office to (a) determine whether an EIA is required, (b) review EIAs and EMPs, and (c) make critical decisions on approval of EIAs (ICJ 2017).

105. EIA studies were completed for zone development (four in total), and individual enterprises (based on type and size of industry) were required to develop IEE and E CPP. The mobile review team includes the DG or deputy DG (DDG) of the ECD, EIA Division, ECD PCD, MOI, and a representative of Thilawa SEZ. The review is normally completed within 45 working days. This process allows for companies in some cases to start construction before EIA approval. Table 12 summarizes the status of E CPPs, IEEs, and EIAs as approved by the OSSC environment section as of July 1, 2017.

Table 12

Status of E CPPs, IEEs, and EIAs approved by OSSC (as of July 1, 2017)

Type	Approved	Under appraisal	Under preparation
E CPP	84	1	5
IEE	1	4	8
EIA	4	2	—
Total	89	7	13

106. In terms of environmental management, the OSSC at Thilawa SEZ ensures that monitoring reports are completed and inspections are carried out during the construction and operation phases. Table 13 summarizes the number of monitoring reports and inspections as of July 1, 2017.

Table 13

Thilawa SEZ monitoring and inspection reports

Type	Construction stage	Operation
Monitoring reports received by OSSC, TSMC	69 (started January 2016)	4 (for industry, July 2017) 12 (for zone development 2015)
No. of inspections (total times) conducted by OSSC, TSMC	96 (started May 2015)	9 (started March 2017)

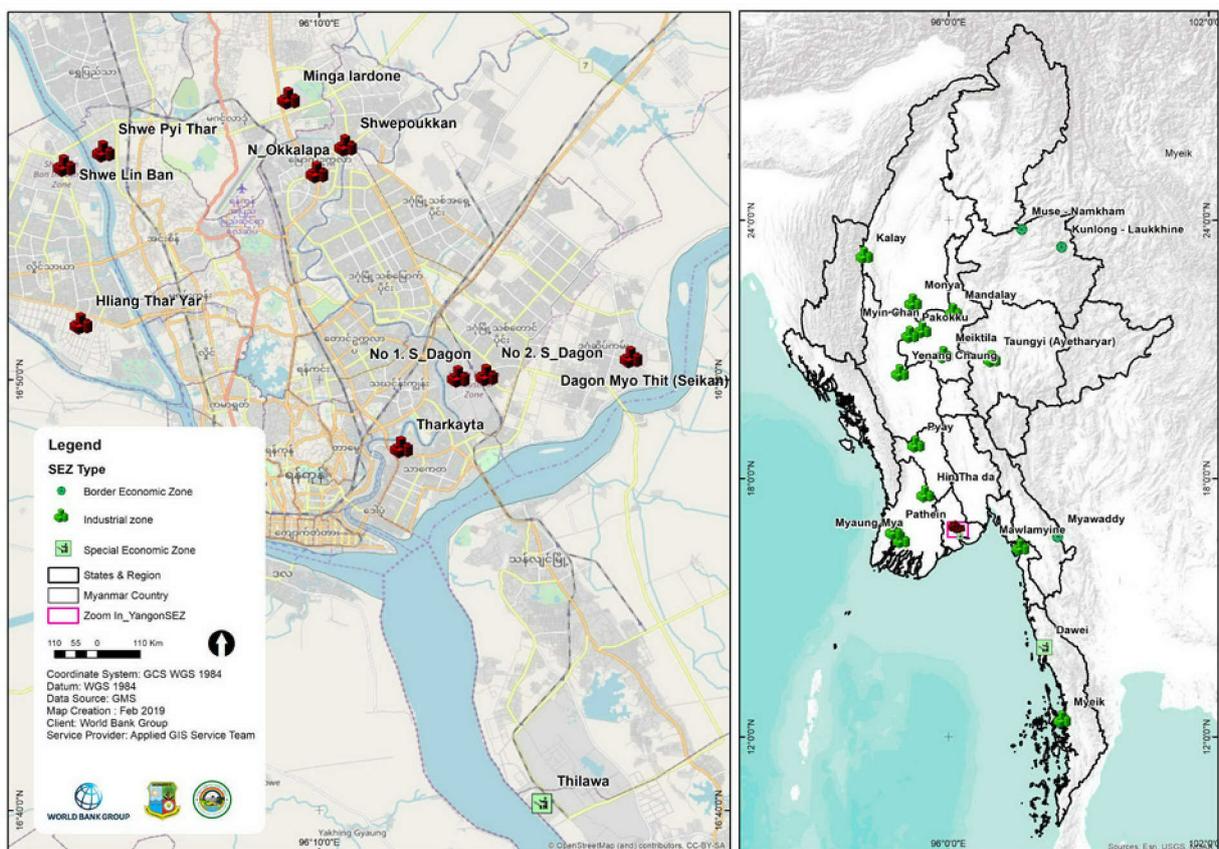
Note: TSMC = Thilawa SEZ Management Committee

107. The Thilawa SEZ is often cited as a practical model for ensuring compliance with the EMP, monitoring, and the process of setting up a centralized wastewater treatment system. However, representatives of JICA and Nippon Koei responsible for implementing this process cautioned against using this approach for other SEZs due to the type and size of industries planned for the Dawei, Kyaukphyu, and other SEZs in Myanmar.

108. The approach of doing an EIA for an industrial park and then IEEs/EMPs for associated factories is being adopted for other urban development projects. However, more clarity on how these decisions are made and clearer guidance are needed. For example, an EIA for the Yangon Urban Area Expansion (approximately 400 acres) is required, as well as separate IEEs/EMPs for wastewater treatment plants, water supply and distribution, roads, manufacturing, and light industry. Further guidance is needed in light of all the planned SEZs and industrial parks, especially in Yangon and Mandalay regions (Figure 20).

Figure 20

Proposed and existing SEZs in Myanmar



2.9 Limited Use of Strategic Environmental Assessment for Planning

109. Another issue discussed was the lack of Strategic Environmental Assessment (SEA) for the planning of large developments. Chapter X of the EIA Procedure (2015) states that MONREC can request for other policies, strategies, development plans, frameworks, and programs prepared by relevant government organizations to undertake an SEA study in accordance with the SEA guidelines.

110. The SEA of the hydropower sector in Myanmar, carried out by MONREC, Ministry of Electricity and Energy (MOEE), and IFC with support from the Government of Australia, was a pilot project implemented in response to the scale of planned hydropower development. There are currently 29 hydropower projects (HPPs) with installed capacity of 3,298 MW and six HPPs under construction (totaling 1,564 MW). The government has received proposals for 51 HPPs planned totaling 42,698 MW installed capacity (Figure 21).

111. The SEA provides planners and decision makers with significant information about low-, medium-, and high-risk areas for hydropower development across the country. It presents an informed hydropower pathway for each major river basin, taking a balanced approach and aiming to replace project-by-project planning (IFC 2018). It also provides baseline information across the country that can be used for other sectors.

112. Based on the experience of implementing this SEA, it was recommended that a SEA procedure be developed under the ECL (2012) to provide regulatory guidance on when to apply a SEA to sectors, such as mining and transportation, or to areas, such as SEZs. In addition, the SEA recommended strengthening elements of the EIA Procedure (2015) to:

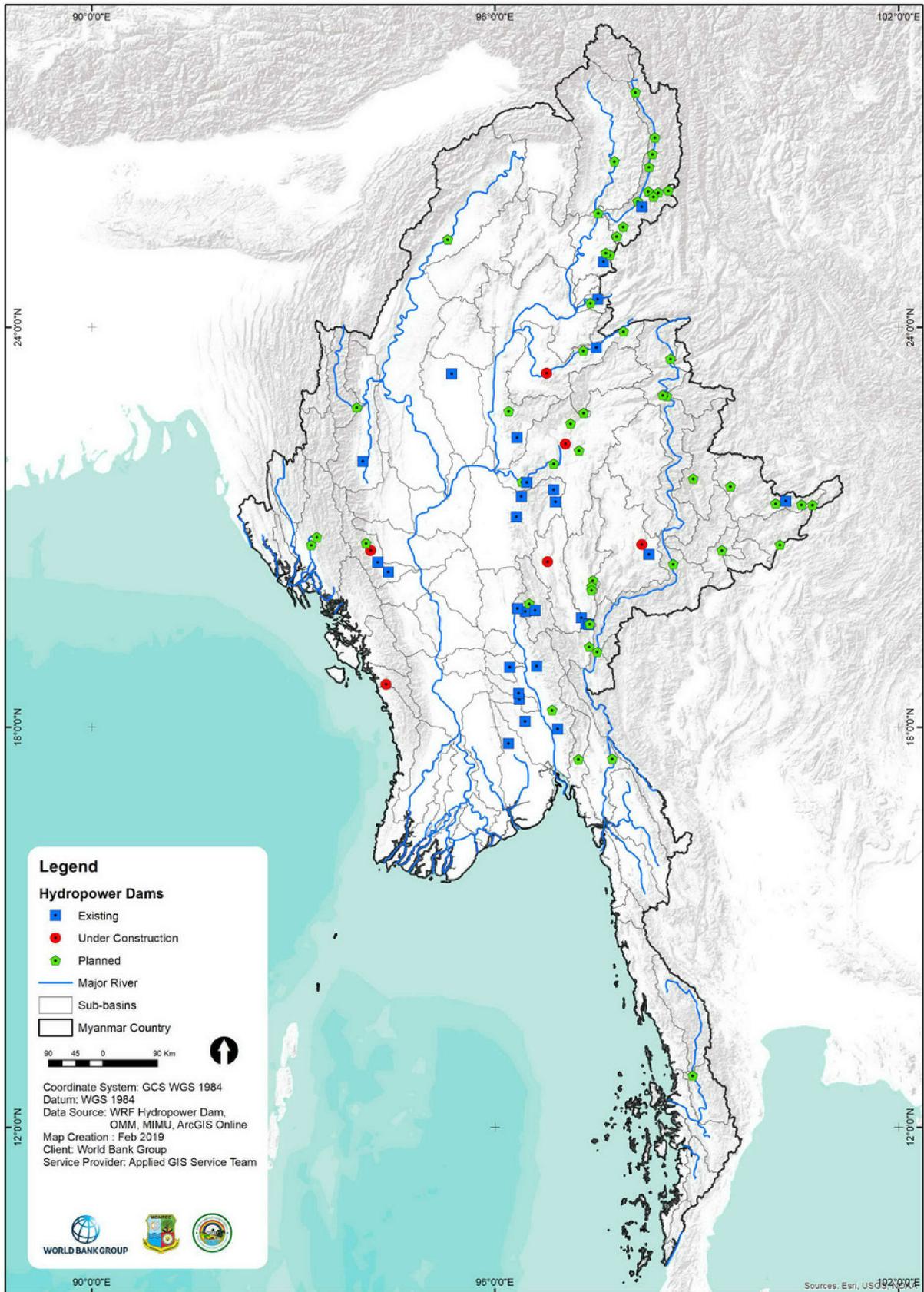
- Ensure that environmental assessment process commences during feasibility and project planning so that the EIA contributes to siting and design to avoid and minimize major E&S impacts;
- Integrate SEA provisions into the existing EIA Procedure, recognizing the weak legislative and procedural instruments for social safeguards in medium- to large-scale developments, including hydropower;
- Broaden current guidance on stakeholder engagement to ensure that consultation is undertaken before, during, and after project construction, not just as part of the EIA or resettlement process, and incorporates expanded stakeholder engagement in conflict-affected areas; and
- Approve and implement the EIA Guidelines for HPPs developed by IFC for MOEE and MONREC.

113. The final report of former United Nations (UN) Secretary-General Kofi Annan's commission on the Rakhine issue called on the government to implement an SEA on the planned Kyaukphyu SEZ. An SEA could be used to examine how the SEZ will affect local communities and the economic implications on sectors and industries in the region.

114. The MCRB has also carried out several sector-wide impact assessments (SWIAs), including for oil and gas, tourism, information and communications technology (ICT), mining, and palm oil (ongoing). The SWIA on limestone, gold, and tin mining in Myanmar analyzed the impacts of mining of these commodities on the environment, local communities, and workers, looking at both the formal and informal parts of the sector. As part of this, the MCRB supported the ECD in facilitating a consultation on draft guidelines intended to guide those undertaking environmental assessment and studies for the mining sector (Myanmar Times 2018).

Figure 21

Status of hydropower development in Myanmar



Source: IFC 2018.

2.10 Inadequate Public Participation and Disclosure

115. Opportunities for the community and civil society to actively participate in the EIA system in Myanmar are inadequate, as it is still a new system and slowly implemented. This means that there is limited capacity for the project-affected people (PAP) to exercise their rights under the procedure. Effective public participation requires support and capacity development for PAPs and civil society's meaningful engagement in the public participation process. The methods employed for conducting public consultations seem to vary widely, and, as yet, there is no standard practice for demonstrating how the public's views and concerns have been considered and either rejected or incorporated into the EIA report (Schulte and Baird 2018).

116. Challenges still remain with public participation with regard to information disclosure during the IEE and EIA report investigation stages. The EIA Procedure itself do not specify what information must be disclosed to the public, other than 'project-related information'. As a result, the type and amount of information that is actually shared with the public (as well as the method for dissemination) vary widely across projects (Schulte and Baird 2018). The surveys with the EIA Division, reviewers, and CSOs revealed that very few EIAs are disclosed to the public. Consultants and companies also called on more EIAs/IEEs to be disclosed to improve transparency and accountability.

117. Generally, the offshore oil and gas sector is performing better in relation to disclosure. In 2016, the MCRB surveyed companies in the oil and gas sector and found that 11 out of 19 offshore blocks (58 percent) had disclosed IEEs and 4 out of 15 onshore blocks (26 percent) had disclosed EIAs (MCRB 2016).

118. In 2016, the MCRB and Pact's Mekong Partnership for Environment co-organized a workshop on 'Developing Guidelines for Public Participation in EIA' to obtain feedback from EIA consultants and project proponents on their experience of carrying out the IEE/EIA consultations with the local communities. The workshop findings, among others, were that the EIAs are not made publicly available and that making them publicly available can help improve the EIA practice and reduce impacts for future projects because consultants and practitioners can identify gaps and opportunities from previous projects and apply them to their own project (MCRB 2018a).

119. Consultants responded that they always conduct public consultations and record their results during the preparation of the EIA reports. The common issues with public consultation were difficulties getting permission from the General Administration Department (GAD), limited participation of line ministries and sector agencies, limited participation of local communities and NGOs, limited understanding of technical information, and political issues not related to the project being raised during consultations. Companies reported the following challenges in conducting stakeholder engagement:

- Confirming the schedule is difficult when waiting for confirmation from the ECD on the PPR or scoping report.
- Providing sufficient notice to local communities is difficult, given the approvals required to hold meetings, including those from the line ministry, regional government, and GAD.
- There is limited commitment and participation of the state/region government, GAD, and sector agencies or ministries.
- There is a need to improve participation of women and ethnic minorities as well as balance the views of dominant stakeholders, that is local authorities versus local communities.

2.11 Limited Provisions for Social Impact Assessment (SIA)

120. Article 7 of the EIA Procedure mentions that projects should comply with the international good practices on involuntary resettlement and indigenous peoples, which are World Bank Group and ADB safeguards. However, no article explicitly mentions which ministry is obliged to handle reviewing, approving, and monitoring follow-up processes and implementation of social issues. The policy and legal framework under the National Land Use Policy (2016) is currently under development, and the Land Acquisition Act 1894 is under review by parliament. This means that there are still limited laws, rules, and procedures related to voluntary and involuntary resettlement and indigenous people's rights.

121. Consultants and companies reported that reducing the need for community development plans (or funds) would speed up the EIA process and that these are not a core component of EIA. More guidance is needed on when these sub-plans should be developed and to ensure they are relevant to the size and type of project. However, the procedure adopted international practice which defines environment in the broader sense, including livelihoods, community and occupational health and safety, community development, and so on.

2.12 Need to Resolve Issues with Myanmar Investment Laws and Sector Laws

122. Myanmar also adopted other laws with potential implications for the implementation of the EIA Procedure (2015), especially the new Investment Law (2016) and Investment Rules (2017) superseding the Foreign Investment Law (2012). Article 36 of the Investment Law (2016) requires project proponents to obtain approval from the MIC if their businesses are capital-intensive investments and have a significant impact on the environment and the local community. Section 5 of the Investment Rules (2017) lays out criteria for the MIC to consider in determining whether a project is likely to 'cause a large impact'.

123. There still remains a lack of clarity over the relationship between the Investment Law and Rules and the EIA Procedure (2015), particularly around the timing for preparing the EIAs/IEEs. Currently, projects obtain approval from the MIC¹² before submitting the Project Proposal to the ECD to determine whether an EIA, IEE, or EMP is required. As the MIC approval form includes the project design, type, and specific location of the project, this limits the analysis of alternatives and opportunities to avoid or mitigate impacts through siting and design. There are still some economic activities under the Investment Laws and Rules that are different to Annex A of the EIA Procedure that can be misinterpreted by project proponents (Thu 2018).

124. The relevant sector laws may also need to be reviewed. The issues with the new Mining Rules (2018) were discussed in Section 2.6. Consultants also reported during the survey that the ECD often splits a large project into separate components. For example, a hydropower dam may require separate EIAs/IEEs for (a) dam construction and operation, (b) transmission lines, and (c) quarry area. This approach means that the ECD receives three EIAs/IEEs instead of one; this does not allow for the cumulative impacts of the project to be assessed. The overall EMP needs to address the impacts of all project components so it does not make sense to split into separate assessments. The procedure does allow for combined projects, and the quarry and transmission lines should be treated as associated facilities of the HPP.

¹¹ The MIC application process: www.dica.gov.mm/en/step-by-step/mic-application-process.

125. Some NGOs question whether the EIA report should be a mandatory requirement before getting approval from the MIC (ICJ 2017). This is important to consider as it is clear from this evaluation that projects have proceeded without approval from the ECD, and some sector ministries/departments in Myanmar have also been found to be granting prior permission before getting the ECC or approval (Sano et al. 2016). There is an opportunity to potentially integrate the requirements within the ECD Project Proposal with the MIC Permit. This is important to consider in light of the announcement made by the Ministry of Commerce (MOC) in November 2018 that it will be setting up a single-window system for investors to obtain all relevant permits and approvals.

126. The MOC aims to engage with other ministries to develop the OSSC to ensure compliance with necessary procedures, including the EIA reports, land acquisition, electricity, construction permits, and hiring of workers. The single-window system is being developed to encourage more local and foreign investment. Myanmar was ranked 171st in the World Bank Group Doing Business 2019 report, so there is a need to improve business regulations, but not at the expense of lowering the standards for EIAs/IEEs/EMPs and inspection, monitoring, and compliance.



photo: ©Kline Thwe Wynn

3

CURRENT CONTEXT FOR ACTION

3. CURRENT CONTEXT FOR ACTION

3.1 ECD Action Plan

127. At the policy level, the NEP (2019) and MSDP (2018–2030) provide the foundation for mainstreaming ENR into development planning. MONREC and the ECD have also set ambitious targets to recruit more than 19,000 staff by 2025 and establish 73 offices at the district level and 365 offices at the township level. Internally, they have also recognized the urgent need to strengthen the EIA systems. Any future investments and programs can build on this momentum and scale-up of staffing levels and capacity.

128. In June 2018, the ECD prepared the 'Action Plan on Reviewing EIA Reports' (No. EIA I 1/5/757/2018). The plan followed an internal meeting with the DG, DDG, and all staff from the EIA Division and identified the following challenges in review documents:

- Staff cannot solely focus on review of EIA reports as they need to do administrative tasks and participate in many meetings/workshops.
- Staff have limited time to review EIA reports as they are also responsible for other administrative, logistic, and communications tasks.
- EIA reports submitted are not in line with the format prescribed in the EIA Procedure and are of low quality (and take more time to review), and key steps are not followed before submission, for example, Project Proposal, Consultant Registration, and scoping report.
- There is a limited number of EIA Division staff for reviewing the EIA reports, and staff have limited background expertise and skills.
- Consultants do not effectively respond to the comments of the ECD to revise the reports, and time is spent going back and forth, which is an administrative burden.
- The EMP reports are initially examined by the relevant states and regions (the ECD office) and then submitted to the ECD headquarter, which may duplicate efforts.

129. The EIA Division is currently stretched beyond its capacity to address the approval of existing reports and the submissions of new EIAs/IEEs/EMPs. The urgent actions identified by the ECD to address the burden of reviewing and approving reports are summarized in Annex 6.

130. Many of the actions align with the key issues identified in this EIA systems review and the recommendations proposed in Section 4. However, more coordination with the PCD is needed to ensure the post-EIA monitoring and inspection process is also strengthened.

131. During the Environment Sector Coordination Group (ESCG) meeting in August 2018, the DG of the ECD highlighted priority project proposals to be supported by the development partners. Table 14 summarizes the activities that could improve the EIA process, monitoring, inspection, and audit.

Table 14

ECD priority project proposal

Name of program/ project	Goals/objective	Duration	Estimated budget (US\$)	Potential development partners
Central Environmental Database System	To provide consolidated primary and secondary data from relevant ministries and departments	—	500,000	To be determined
ECD ICT Facility developed	Operational effectiveness strengthened within the ECD	6 months	500,000	To be determined
Establishing the ECD e-library	To support the environmental research activities	2018–19	50,000	KOICA
Spatial data management and development	To develop and manage spatial data related to environment-related activities and issues	5 years	200,000	To be determined
Establishment of Polluter Pay Principle and PES	To develop the financial resource for EMF	5 years	500,000	To be determined
Formulation of the NEQ Standards	To protect the health of human beings and ecosystems	2 years (2018–19)	Technical cooperation	ADB

Note: KOICA = Korea International Cooperation Agency.

3.2 Ongoing Support by Development Partners

132. Development partners have been working together with the GoM since the introduction of the EIA Procedure (2015) to (a) strengthen the capacity of the ECD at the union and state/region levels, (b) enhance the EIA review and approval function of the ECD, (c) develop sector-specific EIA guidelines, (d) improve supervision and monitoring, and (e) develop an EIA tracking system. A number of development partners have provided support to the ECD over the last three years as summarized in Annex 7.

133. Investments by development partners have centered on capacity building, training, and the development of guidelines for EIA review and approval for sectors (Annex 7).

134. Some of the ongoing planned initiatives by development partners are summarized below:

- **World Bank.** Completed scoping missions and feasibility assessment for establishing functioning and sustainable E&S Safeguard Learning Center (SLC) in the ECD. The SLC would initially be supported by the World Bank, ADB, and JICA. The World Bank also provided trainings on World Bank safeguards and ESF.
- **IFC.** During the initial scoping meetings in October 2018 for this review, the ECD highlighted the urgent need for immediate external assistance in reviewing and approving EIA. From June 2019, IFC will provide two consultants to build the capacity and confidence of the ECD staff in reviewing EIA reports through on-the-job training. IFC will continue to provide thematic trainings based on its PSs and coordinate with the SLC.

- **ADB** will continue to support MONREC with a focus on capacity building. This is reflected in ADB's Myanmar Country Partnership Strategy (2017–2021) under which ongoing safeguards capacity support remains a priority area.
- **JICA** is assisting in setting up the Transitional Consultation Registration and Licensing—English version completed and preparing the Myanmar version. The consultant developed an e-manual (or technical references library) for conducting the EIA/IEE/EMP review across all sectors.
- **UNDP**. To address the backlog, from October 2018, three independent EIA experts reviewed a total of 50 EIAs/IEEs and will also provide a senior management advisor to assist the ECD in decision making. UNDP recently commenced an organizational review in February 2019.
- **NEA** is finalizing the EIA guidelines for the oil and gas sector and continuing to assist the ECD in building capacity to review EIA and issue ECC through the 'Oil for Development' program.

135. The World Bank Group has also completed scoping missions and a feasibility assessment for establishing a functioning and sustainable E&S SLC at the ECD, which has a cadre of trained trainers that can provide training on E&S safeguards to the ECD staff, sector agencies, consultants, and the private sector. The SLC would initially be supported by the World Bank, ADB, and JICA.

136. From 2015 to 2019, IFC has also offered a series of trainings and capacity building on the IFC PSs to the government, private sector, E&S consultants, and CSOs. Training topics include Stakeholder Engagement and Grievance Mechanisms, Benefit Sharing, Benefit Sharing, Gender Mainstreaming, Cumulative Impact Assessments (CIAs), Environmental Flows, Social Risk Assessment and Management, and Biodiversity.

137. In April 2019, the IFC and MEAA entered into an agreement to improve E&S risk assessment and management skills in the private sector on topics such as social survey methods and resettlement action plans, designing impact assessments and management plans, conducting biodiversity assessments and HIA.

138. The UNDP through its Governance Sustainability and Resilience Project has been supporting ECD to develop a comprehensive organizational capacity and human resources development plan to guide its expansion and its delivery of governance responsibilities. Though the initial capacity needs assessment, a short-term training plan for employees of ECD has been developed, including the EIA Division and PCD. It will be important to ensure that the training topics proposed aligns with the SLC.

3.3 Lessons from the Mekong Region

139. Previous assessments of EIA systems in Myanmar were conducted in 2015 before the introduction of the EIA Procedure and over the last few years to measure the effectiveness of implementation. These assessments have all informed initiatives implemented by development partners and are summarized in Annex 5.

140. The ECD in Myanmar has the potential to learn from other countries in the Mekong region that have a longer history of environmental governance and have faced similar changes in terms of natural resources exploitation and rapid economic growth. A summary of these findings is provided below:

- In 2016, ERI prepared a manual for the EIA in the Mekong region that brought together and assessed the EIA Procedure in the six Mekong countries. A number of similarities were observed between the countries, with the most important difference in the way the relevant EIA Divisions assessed the EIA reports and how the final approval of the project is made. Common approaches include use of screening list for projects, a tiered approach to EIA, a requirement to provide access to information, and opportunities for public participation at key steps in the EIA Procedure.

- The monitoring, inspection, and audit stage of the EIA process remains weak due to the strong emphasis on the review of the EIA reports. As a result, less resources are committed to enforcement, compliance, and monitoring (ERI 2016). In terms of resources, Myanmar and Cambodia were found to have a small number for reviewing EIA reports compared to Laos and Vietnam, which also have established independent review panels (Sano et al. 2016).
- In 2011, an evaluation of the Vietnam Law on Environment Protection (Revised) 2005, which had been operational for several years, found that significant improvements had been achieved in the EIA policy framework but there were significant gaps between EIA theory and practice (Clausen, Vu, and Pedrono 2011). The main deficiencies were (a) limited staff resources and (b) limited capacity to review and appraise a large number of EIA documents and monitor the resulting projects.
- Thailand's EIA system has a long history of practice since 1975, when the Enhancement and Conservation of National Environmental Quality Act (NEQA) was first enacted. Under the NEQA (1992), there are still challenges with respect to project screening, terms of reference (ToR) development, preparation of EIA reports, EIA report review process, and EIA monitoring and evaluation (Wangwongwatana, Sano, and King).



photo: ©Khine Thwe Wynn

4

RECOMMENDATIONS

4. RECOMMENDATIONS

141. The recommendations for the EIA systems are grouped under three key areas: (a) tracking and ensuring transparency, (b) strengthening ECD capacity, and (c) operationalizing financial mechanisms. In summary, these recommendations (if implemented) will ensure that the GoM has a modernized information system for managing the EIA process, and the EIA Division and PCD under the ECD are equipped with the appropriate technical capacity, tools, budget, and resources to become a more effective environmental regulator.

4.1 Tracking and Transparency

142. An **Environmental Management Information System (EMIS)** is needed to

- Track and monitor the status of EIAs/IEEs/EMPs,
- Consolidate geographic information system (GIS) layers and biophysical and socioeconomic information to assist with review,
- Improve communication between the EIA Division and project proponents during the review process,
- Improve communication between the ECD headquarters and subnational offices, and
- Ensure EIA/IEE/EMP reports and ECCs are publicly available and automatically assign tasks to the PCD for compliance monitoring.

143. Phase 1 of the EMIS would focus on the process for review and approval of EIA/IEE/EMP reports. The second phase could consider a mechanism for linking the approval and ECC issuance with compliance, monitoring, and audit. This phase would involve both the ECD and PCD, ensuring that monitoring and inspection are triggered, and companies disclose six-monthly compliance reports (according to EIA Procedure 2015). This action would require a significant investment to install the ICT, develop and operationalize the EMIS, train staff on its use, and provide ongoing technical support and capacity building to the ECD.

4.2 Strengthening ECD capacity

144. This set of actions builds on the success of capacity-building and training programs supported by development partners in enhancing the capacity of the EIA Division. At the same time, it is recognized that institutional reforms are also urgently needed to improve the EIA review and approval process, and to ensure that any training is targeted to mirror the planned scale-up of staffing levels and technical capacity. Key actions include the following:

- **Increase staffing/capacity at the union and state/region ECD.** Staffing levels need to be increased significantly, and specialist technical knowledge needs to be developed within the division and brought in from sector ministries and the private sector. Capacity building and training need to be upscaled to include new ECD staff and state/region offices, including both the EIA Division and PCD. Further training is also needed to improve environmental and safeguards performance of consultants.

- **Operationalize a third-party EIA review panel.** Third-party and independent review has been effective for EIA/IEE reviews. However, this has been done in an ad hoc manner where the ECD contacts a Myanmar third-party reviewer and companies pay for the review. A more transparent and independent panel of experts needs to be established urgently to assist in reviewing EIAs in the short term and to set up an improved procurement process.
- **Restructure the ECD EIA Division to separate administration from review.** Internal processes need to be reformed to separate administrative tasks from the review process. The ECD needs to adopt a team approach to review. The ECD will also require modernizing to manage the EMIS.
- **Adopt risk-based, outcome-focused, and proportionate approach to EIA.** The review and approval process needs to adopt a risk-based and outcome-focused approach and a more systematic and simplified approach for prioritizing high-risk projects and approval. This may include:
 - o The prioritization of high-risk or sensitive projects for review and approval by the EIA review team;
 - o The authority for approvals of EIA/IEE delegated to the DG, director of EIA Division, and/or EMP to state/region ECD offices;
 - o The restructuring of the membership and function of the EIA review team; and
 - o The enhancement of the process for issuance of ECC.
- **Improve post-EIA environmental monitoring, compliance, and auditing.** These functions need to be urgently improved to ensure that E&S impacts are being effectively implemented in compliance with the EMP and ECC conditions.
- **Finalize draft sectoral guidelines and prepare additional sector guidance.** Draft sectoral guidelines need to be approved by the ECD and additional guidance is needed for industry, SEZ, and agriculture and dealing with environmental management and compliance in artisanal and small-scale industries.
- **Engage regulated industry in devising compliance approaches (for example, industrial sectors and mining).** The ECD has prioritized dealing with issues in mining and industrial sectors; however, the approach has led to an influx of poor-quality EMPs and IEEs due to limited capacity and resources to comply. The development partners should assist the ECD in preparing a targeted campaign to improve environmental management and compliance in high-risk industries.

4.3 Operationalizing Financial Mechanisms

145. The planned budget allocation for FY2017/18 for the ECD was just under US\$2 million. The ECL (2012), ECR (2014), and EIA Procedure (2015) can be used to establish mechanisms to obtain fees for PES and the review and approval of EIA and monitoring. The following two actions would seek to ensure that the ECD has sufficient budget to be an effective environmental regulator:

- **Establish an EMF to cover costs of EIA review, approval, and follow-up monitoring.** There are mechanisms in the ECL (2012) and ECR (2014) to establish the EMF. The EIA Procedure (2015) also includes provisions to cover the costs associated with the EIA review, approval, monitoring, inspection, and audit. The NECCCC may also need to set a schedule of fees for the submission of EIA/IEE and for PES.
- **Introduce state/regions tax on natural resources extraction to fund environmental management.** The 2008 Constitution provides states/regions with the right to impose tax on extractive industries. This provides a potential source of revenue for environmental monitoring and compliance at the subnational level.

146. Table 15 provides further detail on the context, key messages, actions, time frame (short, medium, and long), and responsibilities for these recommendations.

Table 15

EIA systems recommendations

Context	Key message	Action	Time Frame (S, M, L)	Responsibility
Tracking and transparency				
There is no effective mechanism for tracking the submission of EIAs, IEEs, and EMPs, for ECD to communicate with project proponents or consultants on progress, or to disclose reports to the public. Post-EIA there is no system that links the approval of documents with monitoring and compliance.	An EMIS is needed to track and monitor the status of EIAs, IEEs, and EMPs; consolidate GIS layers and biophysical and socioeconomic information; communicate with project proponents; make reports publicly available; and assign tasks for compliance monitoring.	Evaluation of ICT at the union and state/region ECD offices and document control procedures.	S	ECD and development partners
		Map process flow and ICT requirements for EMIS Phase 1 : EIA review and approval.	S	ECD and development partners
		Prepare procurement plan for ICT and training to establish EMIS Phase 1.	M	ECD and MOPF
		Conduct evaluation to determine ICT, process procurement plan for EMIS Phase 2 : Post-EIA inspection and monitoring.	L	ECD and development partners
Strengthening ECD capacity				
The EIA Division was established in 2016 and staffing levels at the union and state/region levels are increasing significantly. All staff needs are to be supported with capacity building and training to ensure they can perform their duties. Training for consultants and project proponents may assist in improving quality of EIAs, IEEs, and EMPs submitted.	Capacity building and training needs to be upscaled to include new ECD staff and state and region officers. Further training is needed to improve E&S performance of consultants and project proponents.	Prioritize training topics to include in SLC.	S	ECD, World Bank Group, ADB, and JICA
		Prioritize training topics for E&S consultants and project proponents.	S	ECD, IFC, MEAA, and the private sector
		Set up system in ECD to track training, that is, skills passport.	M	ECD, UNDP, and development partners
Staff and consultants reported that the sector-specific EIA guidelines have improved their capacity to review and/or prepare EIAs, IEEs, and EMPs. Staff stressed the need for additional guidance on sectors and screening/scoping.	Draft sectoral guidelines need to be finalized and additional guidance is needed for industry, SEZs, and agriculture and how to deal with environmental management and compliance for artisanal and small-scale industries.	Finalize the sector guidelines for oil and gas, hydropower, mining, and public participation.	S	ECD, IFC, ADB, VLS, and NEA
		Prioritize new guidelines to be developed for sector and small-scale industries, that is, SEZ, transport, and infrastructure.	S	ECD, sectoral ministries, IFC, and development partners
		Provide additional guidance on the screening and scoping phase for EIAs and IEEs.	M	ECD, UNDP, and United Nations Environment Programme (UNEP)

Context	Key message	Action	Time Frame (S, M, L)	Responsibility
Currently all EIAs must go to the EIA review team for approval. Under this system it is not possible to approve outstanding EIAs. The review team process is largely ineffective for approving EIAs and delegating authority for approving IEEs and EMPs should also be considered. Compliance is not triggered until an ECC is issued, so monitoring is done on a complaint basis.	The EIA review and approval process needs to adopt a risk-based and outcome-focused approach and more systematic and simplified approach for approval; for example, the authority for approvals delegated to the DG, director of the EIA Division, and state and region ECD Offices. The membership and function of the EIA review team needs to be reformed and issuance of ECC improved.	Develop risk-based approach and process for categorizing projects.	S	ECD, World Bank Group, IFC, and UNDP
		Legal review to determine how delegations for approval can be approved.	S	ECD, Union Attorney General (UAG), and development partners
		Reform the membership and functions of EIA review team.	M	ECD, EIA review team, and UAG
		Design a new template for ECC.	M	ECD, UNEP, NEA, and UAG
As of January 31, 2019, only 6.9 percent of all reports have been approved by the ECD. Further assistance is needed to address this situation in the short term.	Third-party and independent review have been established for the review of EIA/IEE. A more public and transparent panel of experts needs to be established urgently to assist in addressing the backlog. This could be funded through establishing the EMF or through the EIA Procedure (2015).	Develop ToR for EIA review panel so that experts can be mobilized efficiently.	S	ECD, World Bank Group, IFC, and UNDP
		Prioritize high-risk EIA for review and approval.	S	ECD, World Bank Group, IFC, and UNDP
		Evaluate use of EMF or EIA Procedure (2015) to cover costs of review.	M	ECD, UNDP, WWF, and development partners
Staff reported that they do not have adequate time to review EIAs, IEEs, and EMPs and also perform administrative tasks. The internal processes are also contributing to delays in EIA review and approval.	The EIA Division needs reorganizing separate administrative tasks from the review process, adopt a team approach to review and will also require modernizing to manage the EMIS.	Organizational review to re-organize the EIA Division.	S	ECD, UNDP, and Union Civil Service Board (UCSB)
		Training needs assessment for managing current tasks and operating EMIS.	M	ECD and development partners
The ECD launched a campaign for factories in nine sectors to submit EMPs and install wastewater treatment plants, following surveys and sampling that revealed wastewater was exceeding the NEQ guidelines. As of January 2019, it appears that the 1,155 factories the notification applied to did not submit EMPs.	The ECD has prioritized dealing with issues in mining and industrial sectors, however the approach has led to an influx of poor-quality EMPs and IEEs due to limited capacity and resources to comply. Assist the ECD in preparing a targeted campaign to improve environmental management and compliance	Assess the compliance of factories (nine priority sectors) in submitting EMPs and design a strategy for enforcement and monitoring.	S	EIA Division, PCD, MOI, MEAA, JICA, European Union (EU), Yangon City Development Committee (YCDC) and Mandalay City Development Committee (MCDC)
		Identify other high-risk sectors or areas with environmental degradation.	S	ECD, sectoral ministries, World Bank Group, JICA, and EU
		Design a campaign to ensure environmental compliance.	M	ECD, JICA, and EU

Context	Key message	Action	Time Frame (S, M, L)	Responsibility
There has been a strong emphasis on the approval of EIA, IEE, and EMP reports. However, the need for post-EIA monitoring, inspection, and audit is a major weakness of the environmental governance regime.	Environmental monitoring, compliance, and audit needs to be urgently improved to ensure that E&S impacts are being effectively implemented in compliance with the EMP and ECC conditions.	Compile a list of projects that the EIA Division and PCD are monitoring at state and region levels.	S	EIA Division, PCD, and state/regional governments
		Legal and institutional review on the EIA Division and PCD on compliance, inspection, and monitoring.	S	MONREC, ECD, UAG, JICA, and ADB
		Design process linking EIA, IEE, and EMP approval to monitoring and compliance.	M	ECD and development partners
		Strengthen the ECD's monitoring and inspection capacity in terms of facilities, infrastructure and financial sustainability at the state and region levels.	M	ECD, state/regional governments, World Bank Group, and IFC
ECD has set ambitious targets to recruit more than 19,000 staff by 2025 and establish 73 offices at district level and 365 at township level. A considered approach will be needed to ensure that the roles and responsibilities of the EIA Division and positions are well defined.	Staffing levels of the union, state, and region EIA Division needs to be increased significantly to address the backlog and to review new EIAs, IEEs, and EMPs submitted. Specialist technical knowledge needs to be developed within the division and brought in from sector agencies.	Complete an organizational review of ECD based on the current staffing levels	S	ECD and UNDP
		Determine strategy for the ECD to fill all assigned positions.	M	MONREC, ECD, and UCSB
		Train and recruit staff from sector agencies and within MONREC.	M	MONREC, UCSB, and sectoral ministries
		Design position descriptions for specialist technical knowledge, that is, biodiversity, socioeconomic, and hydrology.	M	MONREC and UCSB
		Prioritize district and township offices for EIA division based on risk or investments.	L	MONREC
Staff reported that they do not have adequate time to review EIAs, IEEs, and EMPs and also perform administrative tasks. The internal processes are also contributing to delays in EIA review and approval.	The EIA Division needs restructuring to separate administrative tasks from the review process, adopt a team approach to review and will also require modernizing to manage the EMIS.	Organizational review to reorganize the EIA Division.	S	ECD and UNDP
		Training needs assessment for managing current tasks and operating EMIS.	S	ECD and development partners

Context	Key message	Action	Time Frame (S, M, L)	Responsibility
Operationalizing financial mechanisms				
The planned budget allocation for FY2017/18 for the ECD was just under US\$2 million. The ECL (2012), ECR (2014), and EIA Procedure (2015) establish mechanisms for obtaining fees for PES and the review and approval of EIA and monitoring.	Allocating funds through the EMF and relevant sections of EIA Procedure (2015) to cover costs associated with the EIA review, approval, monitoring, inspection, and audit. The NECCCC may also need to set fees for submission of EIAs and IEEs and for PES.	Review budget for ECD and EIA Division.	S	ECD and UNDP
		Prepare projected budget for increasing staffing levels and capacity, funding EIA review and monitoring.	M	ECD, UNDP, and WWF
		Design proposal for using EMF to fund these activities or for designing a subnational-level revenue collection and management system for the EIA review, approval, monitoring, inspection, and audit.	M	ECD, UNDP, WWF, and NECCCC
The 2008 Constitution provides states and regions with the right pose tax on extractive industries. This provides a potential source of revenue for environmental monitoring and compliance at subnational level.	State and regional governments can also start authorizing posing tax on natural resources extraction to fund environmental management activities.	Assess pipeline projects related to natural resources extraction and ecosystem services at state and region levels.	M	ECD, UNDP, and MOPF
		Determine mechanisms for state and regions to allocate a percent of natural resource rent for environmental management.	L	MONREC, UNDP, MOPF, and NECCCC

Note: S = Short; M = Medium; L = Long.

REFERENCES

- ADB (Asian Development Bank). 2009. "Safeguard Policy Statement." ADB, Manila.
- ADB. 2016. "Myanmar Country Assessment of Environmental Safeguard Capacity and Capacity Development Plan – Draft Report)." Prepared for ADB TA 8786: MYA - Environmental Safeguard Institutional Strengthening in February 2016. ADB, Myanmar.
- Aung, T. S. 2017. "Evaluation of the Environmental Impact Assessment System and Implementation in Myanmar: Its Significance in Oil and Gas Industry." *Environmental Impact Assessment Review* 66 (9). doi: 10.1016/j.eiar.2017.05.005
- Aung, T.S., Shengji,L and Condon, S. 2018. "Evaluation of the environmental impact assessment (EIA) of Chinese EIA in Myanmar: Myitsone Dam, the Lappadaung Copper Mine and the Sino-Myanmar oil and gas pipelines." *Impact Assessment and Project Appraisal*. doi: 10.1080/14615517.2018.1529948
- Bauer, A., Kirk, N. and Sahla, S. 2018. "Natural Resource Federalism : Considerations for Myanmar", Natural Resource Governance Institute (NRGI), Yangon.
- Charltons. 2018. "Myanmar's Ministry of Mines issues regulations implementing the 2015 Mines Law and commences consultation on draft mining EIA Guidelines." Charltons, Yangon. Retrieved from: <https://www.charltonsmyanmar.com/myanmar-ministry-of-mines-issues-regulations-implementing-the-2015-mines-rules-and-commences-consultation-on-draft-mining-eia-guidelines/>
- Clausen, A., Vu, H and Pedrono, M. 2011. "An Evaluation of the Environmental Impact Assessment System in Vietnam: The Gap between Theory and Practice." *Environmental Impact Assessment Review* 31 (2). doi: 10.1016/j.eiar.2010.04.008
- Coffey. 2017. "Hpakant/Lonkin Gems Tract Environmental Management Plan". Prepared for Advisory Group and key stakeholder findings in August 2017 for ECD in Yangon, Myanmar. Coffey Myanmar Ltd.
- Connette, K. La Jeunesse, K. Connette, G. Bernd, A. Phyo, P. Aung, K. H. Tun, Y. L. Zaw, M. T. Horning, P. Leimgruber, P and Songer, M. 2016. "Assessment of Mining Extent and Expansion in Myanmar Based on Freely-Available Satellite Imagery." *Remote Sensing* 2016 (8). doi:10.3390/rs8110912.
- Emerton, L and Kyin. 2018. "Myanmar Environmental Financing Status and Trends: Update of Expenditures, Income & Funding Sources as of FY 2017/18." WWF and Wildlife Conservation Society, Yangon.
- Emerton, L. Kyin, A and R. Tizard. 2015. "Sustainable Financing of Protected Areas in Myanmar." Wildlife Conservation Society, Yangon.
- ERI (EarthRights International) (2016). "Manual of Environmental Impact Assessment in the Mekong Region: Commentary and Materials (First Edition)". Prepared by Mekong Legal Network and Matthew Baird for ERI in September 2016. ERI, Bangkok.
- HIC (Hydro-informatics Centre). 2017. Ayeyarwady State of the Basin Assessment (SOBA) 2017: Synthesis Report, Volume 1, Yangon, December 2017.
- ICJ (International Commission of Jurists). 2017. "Special Economic Zones in Myanmar and the State Duty to Protect Human Rights." ICJ, Switzerland.
- IGES (Institute for Global Environmental Strategies). (2016). "Strengthening EIA in Asia." Prepared for the Asia EIA Conference 2016 in Nagoya, Japan. Hayama: Sano, D., Matsumoto, I., Urago, A., Takahashi, Y. and Genjida, N.
- IFC (International Finance Corporation). 2017. "Baseline Assessment Report: Economic Sectors and Land Use." *Strategic Environmental Assessment (SEA) of the Hydropower Sector in Myanmar*. International Finance Corporation, Washington, DC.
- IFC. 2018. "Final Report." *Strategic Environmental Assessment (SEA) of the Hydropower Sector in Myanmar*. International Finance Corporation, Washington, D.C.
- Mark, S and Zhang, Y. 2017. "From Impediment to Adaptation: Chinese Investments in Myanmar's New Regulatory Environment." *Journal of Current Southeast Asian Affairs* 36 (2), urn: <http://nbn-resolving.org/urn:nbn:de:gbv:18-4-10625>
- MCRB (Myanmar Centre for Responsible Business). 2016. "A Survey of the State of Disclosure of Environmental Impact Assessments in Myanmar's Oil and Gas Sector." Myanmar Centre for Responsible Business, Yangon.

- MCRB. 2018a. "Civil Society Organizations Stress the Need for More Information in the EIA Process." Myanmar Centre for Responsible Business, Yangon, Retrieved from: <https://www.myanmar-responsiblebusiness.org/news/information-eia-process.html>
- MRCB. 2018b. "Sector Wide Impact Assessment of Limestone, Gold and Tin Mining in Myanmar." Myanmar Centre for Responsible Business, Yangon, Retrieved from <http://www.myanmar-responsiblebusiness.org/pdf/SWIA/Mining/00-Myanmar-Mining-Sector-Wide-Assessment.pdf>.
- Myanmar Times. 2018. "Consultation on Draft Mining EIA Guidelines Begins." *Myanmar Times* June 1: pp. 1–6. Available at: <https://www.mmmtimes.com/news/consultation-draft-mining-eia-guidelines-begins.html>.
- Oxfam. 2013. "Balancing the Scales: Using Gender Impact Assessment in Hydropower Development." Carlton
- Raitzer, D., Samson, J and Nam, K. 2015. "Achieving environmental sustainability in Myanmar." ADB Economics Working Paper Series No. 467, Asian Development Bank, Manila.
- Sano, D., I. Matsumoto, A. Urigo, Y. Takahashi, and N. Genjida. 2016. "Strengthening EIA in Asia." Prepared for the Asia EIA Conference 2016 in Nagoya, Japan. Hayama. Institute for Global Environmental Strategies.
- Schulte, William J., and M. H. Baird. 2018. "Myanmar's Nascent Environmental Governance System: Challenges and Opportunities." *Natural Resources and Environment* 33 (2): pp. 21–26.
- Spectrum. 2018. "Women and EIA Process: A case study on gender aspects of EIAs in four Myanmar projects." Spectrum SDKN (Sustainable Development Knowledge Network), Yangon.
- Thu, S. A. 2018. "Improving the Effectiveness of Environmental Impact Assessment System in Myanmar Based on the Integrated Holistic Approach." The University of Seoul.
- UNDP (United Nations Development Programme). 2016. "Needs assessment for effective implementation of Environmental Conservation Law. United Nation Development Programme, Yangon.
- UNDP and WWF (World Wildlife Fund). 2018. "Scoping Study: Needs, Considerations & Options for the Design of Myanmar's Environmental Management Fund." WWF-Myanmar and UNDP Myanmar, September 2018, Yangon.
- Wangwongwatana, S. Sano, D and King, P. 2015. "Assessing Environmental Impact Assessment (EIA) in Thailand: Implementation Challenges and Opportunities for Sustainable Development Planning." Working Paper prepared in March 2015 by AECEN (Asian Environmental Compliance and Enforcement Network) in Hayama, Japan. Institute for Global Environmental Strategies.
- World Bank. 2018. "World Development Indicators." Online Database. Retrieved from: <http://databank.worldbank.org/data/reports.aspx?source=world-development-indicators>

ANNEXES

Annex 1. Other relevant natural resources and sector legislations

Some relevant natural resources and sector legislations are summarized in Table 16.

Table 16

Other relevant natural resource and sector legislation

Natural resources	
Regulation	Year
Myanmar Territory Sea Water and Exclusive Economic Zone Law	2017
Marine Fisheries Law (currently under review)	1990
Mines Law	1994
Mines Law Amendments	2015
Mines Rules	2018
Conservation of Water Resources and River Law and Rule	2006
Biodiversity and Conservation of Protected Areas Law	2018
Forest Law	2018
Land Acquisition Act	1894
Industrial Use Explosive Substances	2018
Factory Act	1951
Public Health Law	1972
Prevention and Control of Communicable Disease Law	1995
The Protection and Preservation of Cultural Heritage Regions Law	1998
Farmland Law	2012
Vacant, Fallow and Virgin Lands Management Law	2012
Vacant, Fallow and Virgin Lands Management Law Amendments	2018
Prevention from Danger of Hazardous Chemicals and Associated Material Law	2013
SEZ Law	2014
SEZ Rule	2015
Myanmar Fire Force Law	2015
The Conservation of Antique Objects Law	2016
Myanmar Investment Law	2016
Myanmar Investment Rules	2017
Indigenous Peoples' Rights Protection Law	2015
National Land Use Policy	2016
Occupational Health and Safety Law	2019

Annex 2. Approach and survey results

Methodology

The objectives of the EIA system review are to

- Identify and quantify the operational, resourcing, and administrative bottlenecks as well as constraints and barriers to implementing the regulatory EIA process with the quality and timeliness required by the EIA Procedure (2015) (hereafter referred to as the Procedures) and good international practice;
- Map out and quantify the specific interventions and resources needed to address these constraints; and
- Outline a prioritized set of recommendations to strengthen the Myanmar EIA process centered on the ECD and involving other line ministries, development partners, the private sector, and CSOs.

The key tasks to complete the review were carried out from October 2018 to February 2019 and included the following:

- 1. Consultation with ECD and sector agencies**
 - Initial meeting with DG, EIA Division staff, and director on the key challenges of reviewing and approving EIAs/IEEs/EMPs
 - Analyzing the status of EIA/IEE/EMP reports submitted to the ECD
 - Conducting and analyzing results of surveys with 19 EIA Division staff and mapping the EIA/IEE review and approval process
 - Consultation with the Mandalay, Sagaing, and Yangon region ECD offices.
 - Consultation with sector agencies. Department of Electric Power Planning (DEPP), DOM, and Myanmar Oil and Gas Enterprise (MOGE).
- 2. Consultation with other stakeholders**
 - Face-to-face meetings with development partners including ADB, IFC, World Bank Group, UNDP, NEA, VLS, JICA, and so on
 - International and Myanmar E&S safeguards consultants working in Myanmar, private sector associations, and companies
 - CSOs supporting the implementation of the Procedures, including the MCRB.
- 3. Online surveys (SurveyMonkey)**
 - Developed for third-party reviewers, project proponents, CSOs, and E&S consultants.
- 4. Literature review of previous assessments of EIA systems in Myanmar and the Mekong region**
- 5. Analysis of the status of EIA/IEE/EMP data provided by the EIA Division**

Stakeholder Groups

The following stakeholder groups were involved in face-to-face interviews and online surveys, as summarized in Table 17.

Table 17

Key stakeholders in the review of the EIA systems and process

Stakeholder groups	Description
EIA Division staff	Members of the EIA Division at the union level and also in the Yangon, Sagaing, and Mandalay regional ECD offices
Sector ministries	DOM, DEPP, and MOGE
Third-party (Independent Reviewer)	Individuals or firms involved in the third-party review of EIA/IEE/EMP reports and/or the preparation of guidelines or capacity building for the ECD
E&S consultants	Individuals or consultancy firms involved in the preparation of EIA/IEE/EMP reports in Myanmar and/or in the preparation of EIA guidelines and capacity building for the ECD
Company (project proponents)	Companies that have submitted EIA/IEE/EMP reports in Myanmar
CSO	CSOs that have reviewed EIAs/IEEs/EMPs and ESIA sector guidelines or participated in public consultations or capacity-building activities

This EIA review focused on (a) literature review; (b) consultations with the ECD, sector agencies, and other stakeholders; (c) review of key data related to submissions and review of EIA/IEE/EMP reports; and (d) face-to-face survey and administration of a survey to third-party reviewers, project proponents, CSOs, and E&S consultants.

EIA Division

A total of 19 EIA Division staff participated in the survey—52.6 percent male and 47.4 percent female—with 21.1 percent (4) in the age group between 21 and 30 years, 36.8 percent (7) between 31 and 40 years, and 42.1 percent (8) between 41 and 50 years of age. These staff hold a broad range of qualifications, including bachelor's and master's degrees in forestry, chemistry, physics, engineering (civil, electrical, and mechanical), environmental policy and management, geology, and textiles.

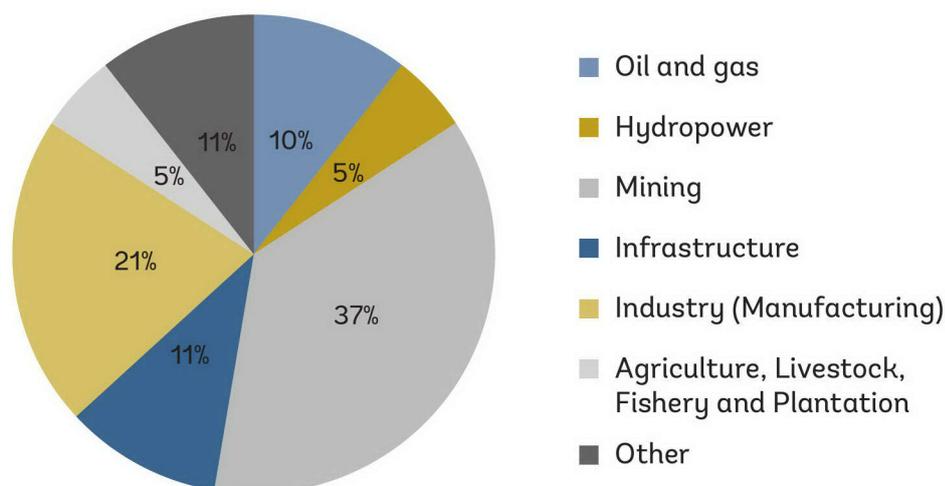
Time working in the EIA Division and work experience. A total of 61.1 percent (11) of the staff interviewed had been in the EIA Division for less than one year, 5.6 percent (1) for 1–2 years, 11.1 percent (2) for 2–3 years, and 22.2 percent for more than three years. Before joining the EIA division, 73.7 percent (14) were working for another ministry or department, 10.5 percent (2) worked in the private sector, and 5.3 percent (1) worked in either a university or the state/region ECD office. Many of the staff had worked in University of Forestry (Yezin), FD, DZGD, and MTE.

Position, level, and teams. A total of 57.9 percent (11) of staff interviewed were staff officers, 26.3 percent (5) were assistant directors, and 15.8 percent were deputy staff officers. A total of 36.7 percent (7) of staff interviewed were from the mining team, 21.1 percent (4) from industry, two each from the infrastructure and oil and gas teams, and one staff member from hydropower (Figure 22). The other two staff members were from a state/region ECD office and the Planning, Statistics, and GIS Division of the ECD.

Staff interviewed were responsible for a range of tasks, including reviewing EIAs, IEEs, or EMPs, managing the administrative process, replying to project proponents, preparing ECC or Approval Letters, managing the EIA review team process, and the transitional consultant registration. Staff reported that they were involved in reviewing EIAs/IEEs/EMPs from all sectors (as specified in the Procedure).

Figure 22

EIA division staff by sector team



E&S Consultants

A number of Myanmar and international E&S consultants also responded to an online survey and participated in a series of face-to-face meetings. The consultants offer an insight into conducting EIA investigations, public consultation, and the process of submitting EIAs/IEEs/EMPs to the ECD.

Initially, 55 E&S consultants responded to the survey; 58.2 percent (32) of the respondents were female and 41.8 percent (23) were male. Of those, 68.5 percent (37) respondents were from a company (both international and Myanmar firms) and 31.5 percent (17) were individuals. The consultants reported that they had prepared EIAs/IEEs/EMPs across all sectors. A total of 55.6 percent (30) of consultants had prepared reports for manufacturing, 40.7 percent (22) for mining, and 35.2 percent (19) for energy sector development. The complete results of the survey of the consultants are provided in Annex 4.

Third-party Reviewers

Third-party (or independent) reviewers have been involved in reviewing EIAs/IEEs/EMPs and preparing the ECC or Approval Letters. The reviewers have either been funded directly by ADB, UNDP, VLS, NEA, and others to provide independent review or through the mechanism in the Procedures which allows for project proponents to pay for third-party review.

These experts provide a unique insight into the EIA system. For example, three of the reviewers included in the face-to-face meetings had been assisting the ECD in the review of EIAs/IEEs for over three years primarily in the oil and gas sector, infrastructure, and industry.

Companies

Only 14 representatives of the private sector (6 male and 8 female) responded to the online survey. Out of the companies, 85.7 percent (12) were international companies and 92.9 percent (13) of companies had submitted an EIA/IEE/EMP for energy sector development, 14.3 percent (2) special investment projects and other economic activity, and 7.1 percent (1) infrastructure and service development, transportation, agriculture, livestock, and forestry development. There was not enough information from the online surveys to present the quantitative results, so the qualitative information supported by face-to-face meetings is presented below for the key steps in the Procedures.

Results of Survey and Face-to-face Interviews

The survey questions were structured around the key steps in the Procedures; responses were recorded through the SurveyMonkey tool for data analysis. Additional questions were included to determine the effectiveness of (a) the capacity building and training provided to the EIA Division and (b) the sector EIA guidelines that are under development. The following sections summarize the key findings of the interviews and consultation with the EIA Division staff, E&S consultants, third-party reviewers, and project proponents/companies.

Screening

Under Article 23 of the Procedures, project proponents are required to submit a PPR to the ministry to determine the level of assessment that is required. A reference to the list of project types, sizes, and thresholds requiring an EIA is contained in Annex 1 of the Procedures. The ECD is required to provide advice on the type of environmental assessment within 15 working days.

The EIA Division reported that PPRs are not always submitted, and consultants and companies indicated that the decision on whether an EIA/IEE/EMP is required can take up to 2–3 months instead of the required 15 days. This leads to more administrative tasks for the EIA Division, a delay in starting the environmental assessment, or projects proceeding without an EIA/IEE/EMP in the planning stages. The consultants recognized the limited resources and capacity of the ECD and recommended simplifying the process so that a quick decision can be made on the PPRs.

Companies reported that it is normally clear from Annex 1 whether an EIA or IEE will be required so decisions from the ECD could be issued more efficiently. They suggested that the authority to approve these could be delegated to the director level and a separate team could be set up to deal with screening and coordinating with companies. This could be further improved by setting up an electronic system to register received PPRs that then links to the next steps in the process, that is the scoping report and EIA investigation or a response to the project proponent on there being no need for further EIA investigation.

The EIA Division and third-party reviewers agreed that Annex 1 is useful for screening projects; however, the list does not include all types of projects and small-scale activities and there are some inconsistencies on the type of projects that require EIA/IEE between the MIC permit and the Procedures.

An EIA can also be triggered under Article 25 of the Procedures if the project is located or will have foreseeable impacts on any legally protected national, regional, or state areas including protected areas (PAs), key biodiversity areas (KBAs), public forest, wildlife sanctuary, cultural heritage areas, and others. The EIA Division uses GIS software or hard copy maps to check the project location during the screening phase.

IEE Reports

An IEE is required for projects that may have some adverse impacts, but of a lesser degree and/or significance than those for an EIA. In terms of quality of IEE submitted, no staff reported that the quality of IEE reports was very good or good, 37.5 percent (6) reported acceptable quality, 56.3 percent (9) poor, and 6.3 percent (1) very poor. Figure 23 shows the sections that are inadequate and Figure 24 shows the sections that consultants reported most difficult to prepare.

Figure 23

IEE sections that are inadequate

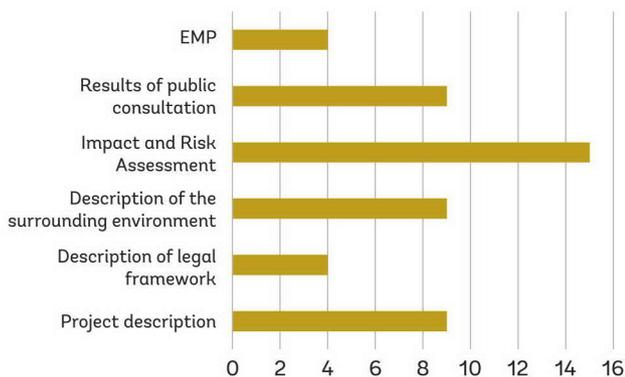
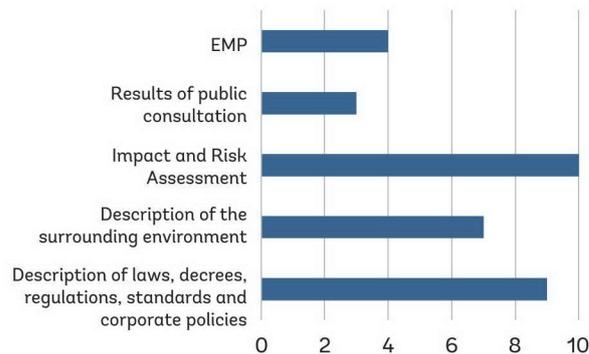


Figure 24

IEE sections most difficult to prepare



It was noted that the description of the project and the surrounding environment (or environmental baseline) is normally done to a good standard; however, the main challenges related to the impact and risk assessment and quantifying the project impacts. As the methodology for impact assessment does not quantify or describe the project impacts, this then leads to a poor EMP with insufficient measures to manage impacts. The ECD staff reported that the IEE reports could also be improved by carrying out public consultations and recording their results.

The consultants reported that some of the challenges were that the legal section is not always relevant to the project; yet, the ECD requests a long list of all laws, rules, and procedures. Some consultants admitted that they find it challenging to apply impact and risk assessment methodology for all industries and project types.

The third-party reviewers found that the quality of IEE reports ranged from poor to good and largely depended on the consultant’s expertise and experience. Normally, the contents covered in the reports are in accordance with the Procedures; however, the description and understanding of the impacts and risks is not always consistent or relevant to the project. For IEEs with poor quality, there is still evidence of cutting and pasting from other reports.

Under Article 42 of the Procedures, the final decision on the approval of the IEE report is required within 60 days. A total of 90.9 percent (20) of consultants reported that they did not normally receive a decision on the IEE report within 60 working days. Companies and consultants indicated that it takes between 4 and 12 months to receive a decision and up to two years in some cases. Sticking to the timeline is important for compliance with the Procedures, to ensure economic investment and to mitigate the risks of operating without approval. Companies noted that the IEE does not require any input from other ministries or line agencies (that is, the review team), so the review process should be quicker than that for the EIA reports.

In relation to the comments received on the IEE reports, the companies and consultants were concerned that the EIA Division was in some cases requesting laws or permits and studies that are not relevant to the project, that is, aquatic biodiversity for a project not located near a river, lake, or wetland. Detailed site-specific EMPs or subplans are also requested which are not applicable at the report stage. There seems to be confusion between the level of detail required for an IEE and EIA.

Scoping

Articles 45–54 of the Procedures pertain to starting the EIA process and preparing the scoping report for the EIA. Project proponents are required to submit the scoping report before starting the EIA investigations. The ECD is required to provide comments on the EIA scoping report within 15 working days.

Of the ECD staff, 46 percent (5) reported that the quality of scoping reports submitted was poor which leads to a delay in responding to the reports. The staff indicated that some project proponents or consultants do not understand the purpose of the scoping report, as at times, the project information or location, detailed methodology for carrying out the EIA investigation, and the impacts and risks that will be assessed are lacking. In some cases, it is clear that the information is copied from another project. The third-party reviewers agreed that some reports do not provide a detailed description of how to carry out the EIA, that is, sampling and survey, stakeholder consultation, and impact and risk assessment.

Consultants and companies reported that the timely approval of a scoping report is needed to confirm the approach and methodology for carrying out the EIA investigation. A total of 82.6 percent (19) of consultants reported that they did not receive comments from the ECD on the scoping report within 15 working days and that receiving a response can take between one and six months or up to a year in some cases. Companies reported that it normally takes between 30 and 90 working days. The delays in approving the scoping report affect the timelines for the completion of the EIA. In relation to comments received, the ECD is requesting information that is beyond the scoping stage (for example, baseline survey, impact assessments, and EMP) which should only include the methodology and approach, not the results of these studies.

EIA investigations often proceed without approval which limits the influence of the ECD on the approach and methodology and can lead to issues during the review if the EIA Division or the review team requests additional sampling or survey information.

Companies and consultants reported that even for approved scoping reports, they have been asked by the review team to conduct additional survey and sampling. On the other hand, third-party reviewers noted that some EIA reports do not reflect the methodology proposed in the scoping report. One consultant noted that a member of the review team or external reviewer could also review scoping reports of high-risk or sensitive projects as often, comments arise on the approach and methodology during the review team meetings which is often too late in the process to resurvey or conduct additional consultations.

In face-to-face meetings with representatives of the MEAA, they noted that the comments provided on the scoping report are often too general and the ECD needs to review the project proposal and scoping reports carefully, as this generally creates problems in the EIA investigation. The ECD has an important role in ensuring that the scope and methodology of sampling/surveys is adequate. The EIA Division staff agreed that further guidance to consultants and project proponents is needed on the scoping report. Consultants stressed the need for a public relations or quality control department within the ECD to track the submission of PPRs, scoping reports, and EIAs and to disclose reports to the public.

EIA

Quality of EIA reports. Articles 55–61 of the Procedures provide steps for undertaking an EIA investigation, and Articles 62 and 63 outline the EIA reporting requirements. In terms of quality of EIAs submitted, 54.6 percent (6) of staff reported that EIA reports submitted were poor, 36.4 percent (4) found reports acceptable, and only 9.1 percent (1) found EIA reports good. Figure 26 shows the sections that are inadequate, and Figure 25 shows the sections that consultants reported as the most difficult to prepare. Of the consultants, 47.1 percent (8) reported that they find the ‘policy, legal, and institutional framework’ section the most difficult to prepare, 41.2 percent (7) reported the CIA the most difficult to prepare, and 35.3 percent (6) reported the impact and risk assessment/mitigation measures the most difficult to prepare.

Figure 25

EIA sections most difficult to prepare

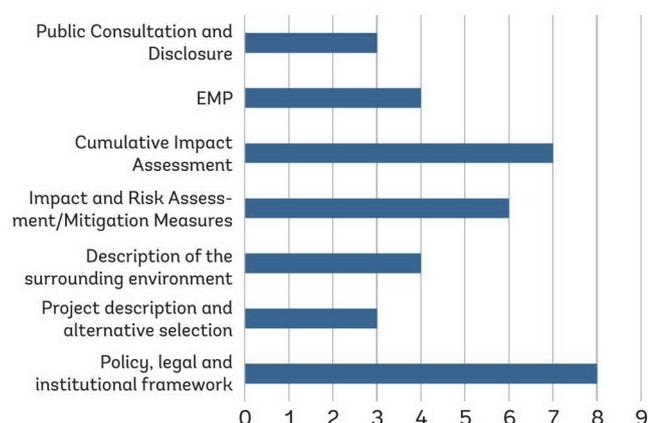
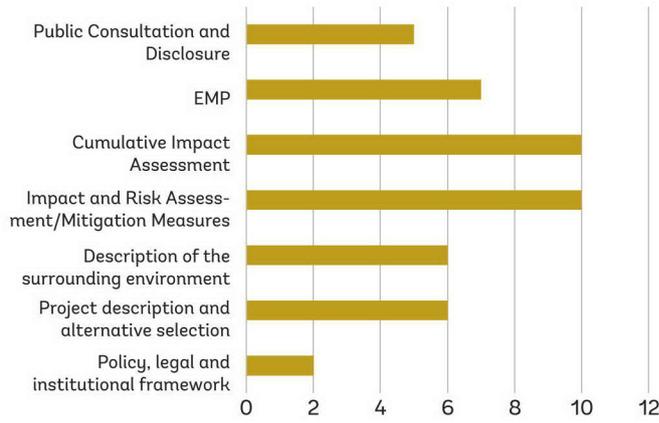


Figure 26

EIA sections that are inadequate



As with the IEE reports, the EIA Division staff reported that the data collection and baseline assessments are often detailed. However, there is often no link between the baseline and the impact and risk assessment and mitigation measures. There is limited quantitative or technical information in the impact assessment methodology used. The very poor reports include ‘cutting and pasting’ of information from other projects and very limited assessment of impacts. The staff also reported that the quality depends on the sector; oil and gas sector reports are relatively good, and other sectors have been improving in 2017/18.

All third-party reviewers reported that the EIAs submitted are generally of poor quality. One reviewer commented that there has been little improvement in the EIAs submitted 2–3 years before those submitted in 2018. The reports are lacking in detail on public consultation and in linking the baseline survey with the impact and risk assessment and EMP. The baseline information is not always relevant to the project, for example, a construction project in downtown Yangon will include a detailed list of species but not include traffic management, issues related to occupational health and safety, or impacts relevant to the project.

The impact and risk assessment section are often the weakest in the EIA reports; there is a lack of in-depth impact analysis and limited effort to quantify likely impacts relevant to the project. Reviewers believe that if all EIA reports were disclosed on a website, it may help improve the quality as approved reports could generate lessons for new reports. Reviewers reported that on average, it takes them five days to review and provide initial comments on an EIA report. Reviewers agreed that adopting a team approach and appointing specialists in the EIA Division could improve the review process.

Reviewers engaged by the NEA ‘Oil for Development’ program have reviewed a number of EIA/IEE reports for oil and gas projects. Most reports are very long with extensive general baseline information with limited assessment of the expected impact of the activities or which measures the project proponent will put in place to manage the impacts. In general, the EIAs submitted by international oil and gas companies are of higher quality than the ones submitted by Myanmar companies.

Administrative review of EIA. The EIA Division staff are responsible for doing the administrative (or initial) review of the EIA report. The submitted report takes time (around 1–2 months) to reach the staff officer responsible for review, and on average, an additional 10 days are needed to review the document. A total of 45.4 percent (5) of staff reported that on average, it takes them more than 10 days to review EIA reports and 36.4 percent (4) reported 5–10 days. Following review, the report may take the same time to reach the DG office. This process can be further delayed if the DG or DDG is not in the office due to other departmental responsibilities.

A process for prioritizing high-risk projects has not been established. For example, a staff officer (who had been in the division for less than one year) had been assigned the initial review for a large HPP planned on the Thanlwin (Salween) River.

All staff reported that they were responsible for conducting administrative review of EIA reports on their own. All staff reported that they either strongly agree or agree with adopting a team approach to initial review. Currently, the staff commented that initial review includes both technical and administrative comments.

There are currently no specialists in the EIA Division that can assist with technical matters during the initial EIA review. All staff agreed or strongly agreed that appointing technical specialists would improve the EIA review process. Staff commented that technical specialists are needed in impact and risk assessment, environmental quality and modeling (for example, water, air, sediment, and noise), ecology, social and community health, GISs planning, marine biodiversity, and hydrology. Relevant sector or technical/engineering expertise is also needed to explain the design and specifications for projects as related to impact and risk assessment.

Reviewers outlined the need to have a provision for the EIA Division to send back poor-quality EIAs to project proponents immediately. In some cases, the staff officers are spending time trying to 'fix the EIA' by doing further research or going back and forth with the consultant and project proponent. One reviewer wants the ECD to take a much tougher stance on EIAs that do not meet Good International Industry Practice (GIIP) rejecting them immediately or requiring additional material.

Initial comments on EIA reports. Article 68 of the Procedures requires the ECD to deliver its final decision within 90 working days from receipt of an EIA report. A total of 82.4 percent (14) of consultants reported that they do not receive a decision on the EIA report within 90 working days. Companies and consultants reported that it normally takes between 6 and 12 months and in some cases up to two years for the initial comments. If the timelines for review are not achieved by the ECD, this leads to delays in project implementation or starting the project without an EIA in place.

In relation to the comments, the consultants reported that the ECD is often requesting detailed management plans and subplans which are normally prepared at a later date by the project proponent and subcontractors. This does not comply with international standards. The requirements for the EMP and subplans also needs to reflect the type of project and scale of impacts. Companies indicated that comments are not always provided in a standard template and comments at times show that there is limited knowledge about project risks and impacts and also phases in mining or the oil and gas sector. Companies reported that community development plans should not be included in the EIAs; they should rather be dealt with elsewhere.

Communication between the EIA Division and companies. In addition to reviewing EIAs/IEEs/EMPs, staff also receive requests from project proponents during the review period. A total of 58.8 (10) percent of staff reported that project proponents contact them during the review period by phone or e-mail or through a meeting. Normally, project proponents contact the staff once or twice during the review period, and staff agreed that they felt pressured to complete the review. The EIA Division indicated that some project proponents do not want to do the EIA investigations and reports as they want to start their project when a permission (from the MIC) is given. Companies have complained to staff that the review process takes too long, and the comments are difficult to respond to.

Companies reported that they always or usually contact the EIA Division during the review period. This is mainly because there is no system to acknowledge the receipt of the report, whether the review process has started, and to ascertain the status of the review. Companies either use e-mail or a phone call or meet the ECD staff in person to discuss the EIA report.

EIA Approval

EIA review team. Articles 67–70 relate to the review and approval process. Currently, all EIA reports must be submitted to and approved by the EIA review team. All stakeholders reported issues with the EIA review team process.

The main issue is that all EIA reports are supposed to go through the EIA review team for approval and this creates delays. All stakeholders recommended further consultation with the ECD and the EIA review team to determine criteria for when they should be involved in review, in a controversial project or a project of certain risk, size, or type of investment, and the purpose of the committee needs to be better defined.

The EIA Division staff and third-party reviewers who had been involved in the review meetings reported that the review team members are not well prepared and do not read the EIA or record any comments before meeting; as a result, the meeting focuses on administrative issues and not technical matters. The sectoral ministries often focus on small points related to legal and other requirements, not the impacts and risks of projects. One reviewer noted that the consultant or companies tend to make long presentations that are not responding to the ECD comments. Often, a series of meetings is needed to drill down into the key technical areas that should be covered in the first meeting.

Another challenge raised is that the ECD lacks experience in administering the process, and other ministries do not understand the objectives of the Procedures, making it difficult to prioritize what issues in the EIA are critical. There are also misunderstandings around the subplans (requirement in Article 63 of the Procedures) on (a) whether the subplans are incorporated into the EIA or as separate documents; (b) which subplans are required for different projects, and (c) when the subplans should be prepared.

The main issue raised by consultants was that there is not sufficient notice to respond to the detailed comments before the meetings. The notification of the meeting is often sent only 1–2 days in advance, which limits the effectiveness of the first meeting. The EIA reports are submitted in English and then comments and responses need to be translated to Myanmar. This process could be improved by the ECD compiling comments from the review team before the meeting.

During the meeting, written responses are provided to the project proponent and then the comments are all read out one by one during the EIA review team meeting. For example, up to 60 pages of comments need to be covered one by one, not allowing any time to discuss any substantial issues. Consultants reported that there tends to be a misunderstanding between the responsibilities of the consultant conducting the EIA and the companies responsible for managing and mitigating project impacts. An electronic system to view soft copies of reports and video conferencing facilities could improve the process and reduce the need for travel. The need for the technical review to include experts with relevant industry and project experience was highlighted by companies.

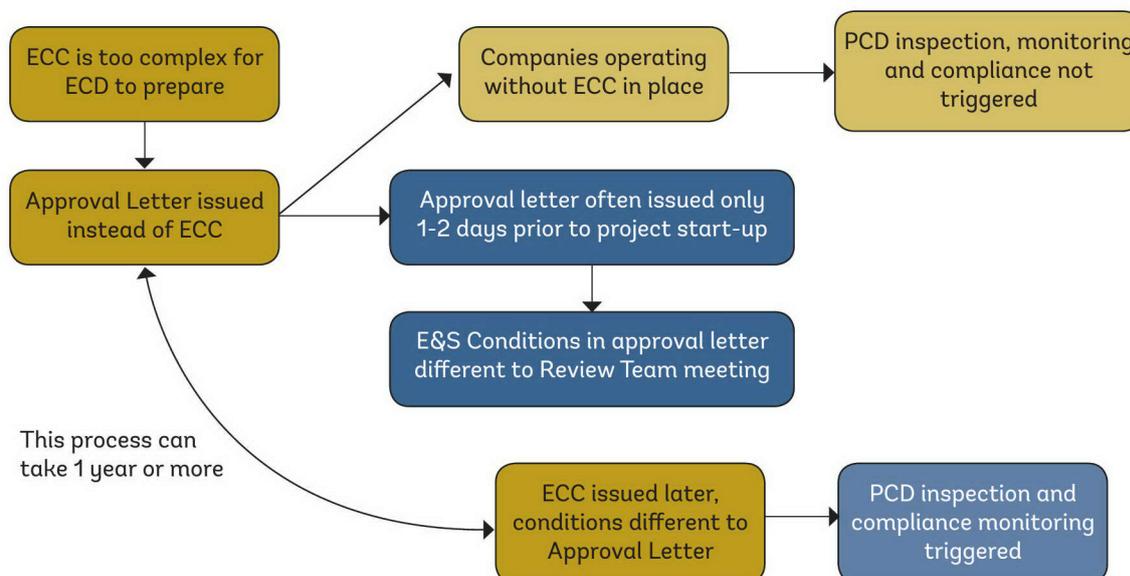
ECC issuance. Project approval requirements and issuance of the ECC are set out in Articles 83–101 in the Procedures. All stakeholders recognized that only a small number of ECCs had been issued, and in most cases, no Approval (or No Objection) Letters were issued. The issues with the approval process are summarized in Figure 27.

Only five of the EIA Division staff surveyed had experience in drafting an ECC; the staff reported that it is very complex as they need to understand both the environmental and social conditions and also the legal requirements. ADB, NEA, and VLS have provided external assistance in preparing the ECCs.

Consultants reported that some issues related to the ECC or Approval Letter are that some of the conditions applied are not relevant to all sectors and include conditions that were not discussed during the administrative review process or review team meeting. Some consultants reported that the preparation of the ECC seems very complex as instead of relying on the commitment table in the EMP, the ECD staff go through the EIA/EMP again, pull out commitments, and put them in an exhaustive list.

Figure 27

Issues with EIA approval and ECC issuance



One of the oil and gas companies reported that four of their EIAs were approved; for one, an ECC was issued and Approval Letters were issued for the other three. The Approval Letters were issued by the ECD only a few days before the activity start-up with some conditions that had not been discussed during the review team meeting. The ECC was issued over a year later and was also not consistent with the Approval Letter. The companies mentioned that some comments and conditions of the EIA approval are provided very late in the process (that is, they are not raised during the review team process) and provide the project proponent with insufficient time to review and implement the conditions before project start-up.

Consultants were aware of projects that have proceeded without approval from the ECD and are under construction or operating without ECCs or Approval Letters in place. Companies admitted that some preconstruction and operations had occurred without approval from the ECD. In this case, companies relied on their own corporate environmental management systems to ensure that activities are in line with the submitted EIA report.

Consultants also raised concerns that some project proponents do not always understand the obligations and commitments under the ECC or Approval Letter, nor do they allocate sufficient resources to implement the EMP. Awareness on the requirements of the EIA, inspection, and monitoring for private sector is urgently needed. The delay in approving EIAs and issuing ECCs also creates issues for consultants, as some cannot submit invoices for final payments.

Third-party Review

A mechanism in the Procedures allows project proponents to pay for third-party review of an EIA or IEE. The companies and consultants agreed that the third-party review is good for the short term, but in the longer term, the ECD should have the capacity to review and approve the EIA. The consultants reported that the third-party comments are generally more relevant to the specific projects, but there are still a lot of comments and not all are relevant. For example, one third-party reviewer provided 50–60 pages of comments, and some were just observations not critical to the EIA report or managing key impacts.

The companies highlighted that a more transparent method is needed to determine the costs and payment schedule for the third-party review and that a permanent panel of independent reviewers should be established. To date, only one firm has been contracted to do the third-party review, leading to concerns around conflict of interest. For example, the company contracted for third-party review is also an E&S consultant. Some reported that the third-party reviewers should only be used for sensitive or complex projects.

Other concerns were that the national reviewers are not always aware of international best practice, and that international reviewers provided by development partners may not assist in developing the ECD's institutional capacity in the longer term. A process to transfer knowledge from third-party reviewers to the ECD staff is important.

Stand-alone EMP

The requirements for the EMP are set out under Articles 76–82 of the Procedures. In terms of quality of the EMPs submitted, 66.7 percent (8) of staff reported that the EMPs were acceptable, 25 percent (3) reported the quality was poor, and 8.3 percent (1) indicated it was very poor. Figure 28 shows the sections that are inadequate, and Figure 29 shows the sections that consultants reported as the most difficult to prepare.

Figure 28

Sections of EMP that are inadequate

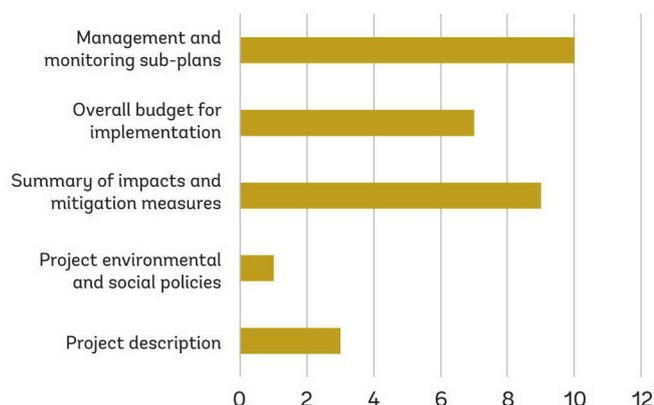
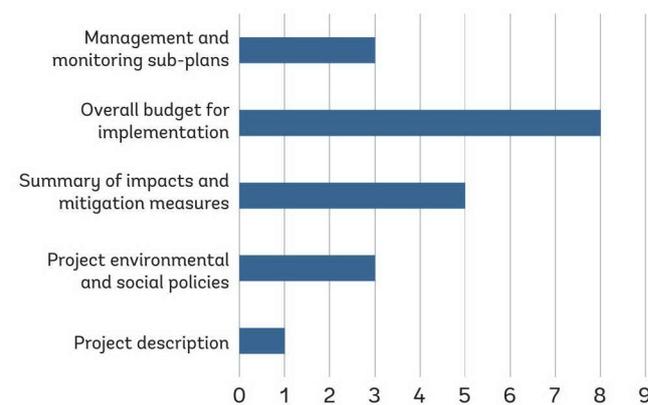


Figure 29

EMP sections that are difficult to prepare



Consultants had mainly been engaged to prepare stand-alone EMPs for the manufacturing and mining sectors. The consultants reported that the overall budget for implementation was the most difficult to prepare, as these are often prepared by the company or subcontractor before different phases of the project (for example, preconstruction, construction, and operation). One of the mining companies reported being involved in developing four EMPs which were submitted to the ECD. These took around 2–3 months to get commented on and 11 months to get approved. One of the EMPs was for prospecting, and comments received requested that the EMP include mine closure and decommissioning.

The third-party reviewers who had reviewed stand-alone EMPs reported that the quality of these reports was poor due to the lack of detail and information. Typically, the mitigation measures and monitoring plan proposed in the EMP seems to be irrelevant to the proposed project and beyond the project proponent's capacity to implement. Reviewers recognized that stand-alone EMPs require baseline information and impact assessment that would usually be done as part of an EIA/IEE, so it will be challenging to prepare for small-scale industries. The EIA Division also noted that small-scale operators do not understand the purpose of the EMP, so the summary of impact and mitigation measures is often poor.

Under Article 81, the ECD is required to issue a decision on an EMP within 30 working days; consultants and companies reported that it usually takes between 3 and 12 months. The companies and consultants reported that in the comments on the EMP, it appears that there is confusion between the different requirements for the EMP and EIA in terms of baseline data, stakeholder consultation, and impact. This is particularly complex for existing projects and small-scale enterprises. Consultants highlight the need for clear guidance on what is expected for stand-alone EMPs and what is feasible, considering the workload of the ECD and the capacity of small-scale industries to prepare and implement these.

Disclosure of IEE/EIA

IEE report. Under Article 29 of the Procedures, the project proponent is required to disclose the IEE report within 15 days of submitting to the ECD. Figure 30 shows the compliance with the disclosure of IEE reports indicated by the ECD Division Staff and Figure 31 shows the compliance for consultants.

Figure 30

Disclosure of IEE reports (EIA Division)

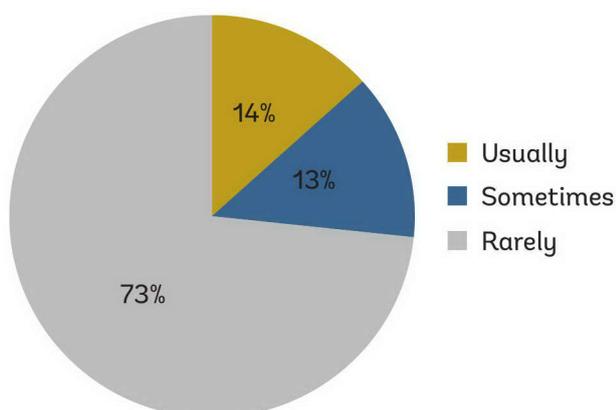
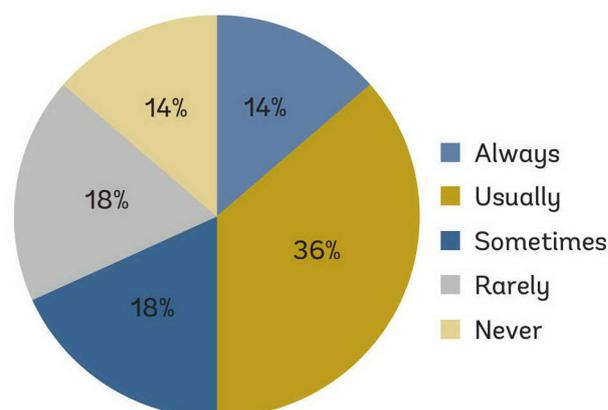


Figure 31

Disclosure of IEE reports (Consultants)



The staff commented that the IEE reports are usually only disclosed in the oil and gas sector. The staff reported that the disclosure of reports is a good way to receive comments from stakeholders, universities, and technical experts. Consultants commented that disclosure is not always done by the project proponent and pointed out the fact that there are several IEEs completed but only a small number disclosed demonstrates a lack of disclosure. Although not all project proponents disclose the IEE report, the consultants reported that it was common practice to disclose the Myanmar version of the Executive Summary to the stakeholders, ward/village/township offices, and so on.

EIA report. Under Article 65, the project proponent is required to disclose the EIA report within 15 days of submission. Figure 32 shows the compliance with the disclosure of EIA reports indicated by the ECD Division Staff and Figure 33 shows the compliance for consultants.

Figure 32

Disclosure of EIA reports (Consultants)

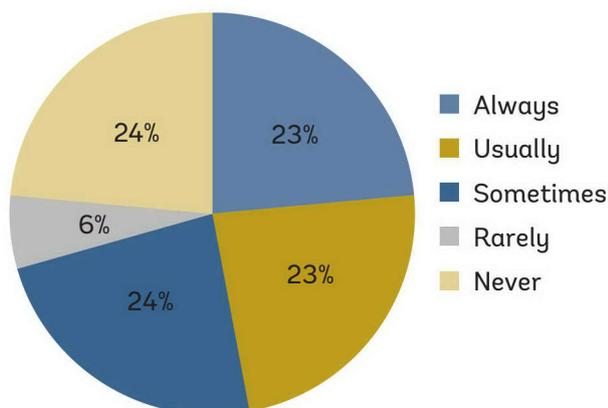
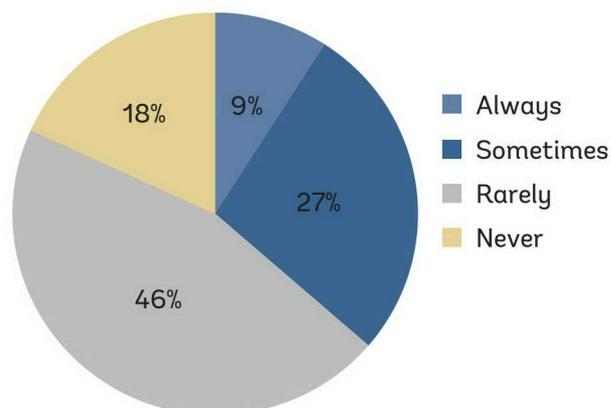


Figure 33

Disclosure of EIA reports (EIA Division)



Of the ECD staff, 46 percent reported that EIA reports are rarely disclosed to the public. The staff reported that disclosing the EIA reports and improving transparency may help enhance the overall quality of EIAs. Consultants noted that the compliance with disclosure requirements for EIA reports depends on the sector and the project proponent and that the government and international finance institution (IFI) projects are usually compliant. The companies reported that they always or usually disclose the EIA reports on their website.

The ECD does not have a mechanism for making EIA reports available online, as the current website capacity does not allow for the EIAs to be hosted on the ECD website. Some staff indicated that more enforcement is needed, as in the EIA should not be approved until the report is uploaded to the project proponent website.

Public Consultation

Consultants responded that they always conduct and record the results of public consultation during the preparation of EIA reports. The common issues with public consultation were difficulties getting permission from GAD, limited participation of line ministries and sector agencies, local communities' and NGOs' limited understanding of technical information, and raising political issues not related to the project. Some of the other challenges the consultants and companies listed in relation to conducting stakeholder engagement are summarized in Table 18.

The reviewers commented that there is very limited public consultation done for EIA reports. Often, the socioeconomic surveys are represented as public consultation or the reports will simply state that 'no complaints' were received. To improve public disclosure, the reviewers highlighted the need for a Facebook page or a website to upload all EIAs/IEEs or to publish a list of projects in the newspaper and then identify an appropriate channel that is accessible to local communities, that is, radio, social media, newspaper. All project proponents must be made to upload their EIAs/IEEs to their website.

Table 18

Summary of challenges with public consultation

Consultants	Companies
<ul style="list-style-type: none"> • There is a lack of environmental awareness of local people in the project area. • For some projects, there are no PAPs or community to participate, for examples for industrial zones and factories. • There is Limited interest of some sector agencies to participate. • Approval from GAD to conduct consultations can delay the process and limit participation of PAPs and local communities. • People use the process to bring up political issues not related to the project. • There is a need to arrange transport and accommodation for the ECD and some sector agencies to participate in consultations. • There is Influence of international NGOs and local NGOs on local communities to oppose the projects. 	<ul style="list-style-type: none"> • Confirming the schedule is difficult when waiting for confirmation from the ECD on a PPR or scoping report. • Providing sufficient notice to local communities is difficult, given the approvals required to hold meetings, that is, line ministry, regional government, and GAD. • There is limited commitment and participation of state/regional government, GAD, and sector agencies or ministries. • Political issues not related to the project are raised by stakeholders. • There is more focus on social than environmental impacts. • There is a need to improve participation of women and ethnic minorities as well as balance the views of dominant stakeholders, that is, local authorities versus local communities.

Monitoring, Inspection, and Compliance

Articles 106–110 of the Procedures require project proponents to report any breaches with the ECC conditions and submit six-monthly monitoring reports. Articles 111–122 in the Procedures set out the monitoring requirements for the ministry and departments. Only one staff member surveyed had reviewed monitoring reports prepared by project proponents (according to Article 108). This was done as part of a capacity-building exercise with ADB for the ESIA for the Letpadaung Copper Mine. Staff recognized the need for a better mechanism for inspection and monitoring after the approval of the EIA/IEE. Two staff members reported that the PCD is responsible for monitoring and inspection.

Of the consultants surveyed, 13 reported that they had conducted inspections and prepared monitoring reports for companies. The main findings are that there is limited implementation of the EMPs; mitigation measures; or health, safety, and environment (HSE) management plans at the project level. Consultants reported that more enforcement from the ECD or PCD is needed to ensure that project proponents comply with the EMPs and conduct regular monitoring and inspection. In some positive cases, inspection and monitoring have been established with the participation of local communities, employees, project proponent, and state/regional monitoring committees.

The companies reported that they include monitoring programs under the EIA report which is approved by the ECD. During project implementation, these activities are undertaken, and a report of the monitoring results is provided to the ECD within the agreed time frame and is posted on the company website. Internal and external audits are carried out according to a corporate environmental management system. In the future, the PCD should lead in conducting inspections or audits.

Training and Capacity Building

The EIA Division staff have participated in a number of capacity-building and training programs related to EIA review and approval. Of the staff surveyed, 13 had participated in capacity building and training, and 6 staff had not completed any relevant training. Staff participated in seminars/workshops, EIA Clinics (one-on-one coaching),

and certified training courses. Training and capacity building had been provided on EIA review and approval, sector-specific ESIA, inspection and monitoring, SIA, biodiversity, and public consultation. Other activities that staff highlighted were the Health Impact Assessment (HIA), training under the IFC SEA of hydropower sector, and coaching from Australian Volunteers International (AVI).

Of the consultants surveyed, 23 had participated in trainings related to EIA/IEE/EMP in Myanmar, including seminars/workshops and certified training courses. Topics of these included public participation, EIA review and approval, biodiversity and SIA, sector-specific ESIA, EMP for nine industrial sectors, and waste management. Company representatives had also participated in certified training courses/seminars/workshops on EIA review and approval, sector-specific ESIA, biodiversity, and SIA.

Most of the staff either strongly agreed or agreed that the training had improved their capacity to review the EIA. The staff highlighted the following training and capacity building as most effective: EIA review and approval, certified training course for oil and gas sector, specific ESIA training, trainings on IFC PSs, database management, and GIS mapping. The staff identified the following additional training needs:

- SIA and public participation
- Training on EIA process, that is, screening, scoping, and EIA investigation
- Risk and impact analysis, baseline data collection, and review and approval of EIA
- Industrial, infrastructure, manufacturing, and other sectors
- Interpreting modeling results for water, air, noise, groundwater, and other indicators
- Biodiversity and aquatic ecology

Some new staff indicated that they had not received any training yet and that training on EIA review and approval was most important for them. It was noted that the staff engaged from states/regions and other ministries had received training on review and approval before reviewing the mining sector EMPs.

The consultants also agreed that training had improved their capacity to prepare EIAs/IEEs/EMPs. The following additional training needs were highlighted by consultants:

- Impact and risk assessment
- Biodiversity
- Socioeconomic survey and public participation
- Modeling for environmental quality and data analysis for water, air, noise, vibration, and so on
- Sharing lessons from implementation of EIAs/IEEs/EMPs in different sectors
- Environmental management system (EMS) and inspection and monitoring

Third-party reviewers had provided ongoing training and capacity building to the ECD staff, including through workshops, seminars, on-the-job training, and EIA Clinics supported by ADB, IFC, UNDP, UNEP, and VLS. These trainings covered EIA review and approval, sector-specific ESIA, biodiversity, SIA, public participation, drafting ECC, and monitoring. The reviewers noted the importance of ongoing practical training that is linked to actual Myanmar projects and on helping staff fulfil their duties.

Of the consultants, 12 had also conducted trainings on sector-specific ESIA, preparation of EIAs, and marine biodiversity workshop for the oil and gas sector agencies. International companies also provided on-the-job training for Myanmar consultants and survey teams, for example, international bird and fish specialists had trained local consultants.

EIA Guidelines

The EIA Division staff and consultants reported that they had used the following guidelines for reviewing or preparing EIA/IEE; EIA General Guideline and ECC; public participation guidelines and EIA guidelines for mining, hydropower, and oil and gas sectors. The consultants also reported using the IFC PSs and NEQ for preparing the EIA/IEE/EMP.

The staff agreed that the guidelines are a useful reference for reviewing EIAs/IEEs/EMPs. The staff indicated that more templates/checklists are needed; they also indicated that additional guidelines should be prepared for manufacturing, SEZs, industry, and infrastructure. Consultants agreed that the guidelines were useful for preparing reports and recommended additional sector guidelines (for example, energy sector, power plants, and factories), including specific guidance on sampling, design of the EIA process, impact and risk assessment, and SIA.

Third-party reviewers have also contributed to the development of the following guidelines: (a) EIA General Guideline and ECC, (b) EIA Mining Guideline, and (c) Public Participation Guidelines. In terms of further guidance needed, the reviewers highlighted the need to develop more sector-specific guidelines, better screening criteria, guidance for scoping reports, and more guidance for consultants on how to prepare EIAs/IEEs. Issues noted with the guidelines are that the format for sector guidelines is not consistent and some do not include information on how to effectively review the EIA.

The companies had participated in workshops or reviewed the following sector guidelines: (a) EIA Oil and Gas Guidelines, (b) EIA Mining Guidelines, and (c) Public Participation Guidelines. In finalizing these guidelines, the companies noted that they should be consistent with the Procedures and that additional guidelines for biodiversity, climate change, and CIA would be useful. Training on EMS and relevant International Standards Organization (ISO) was also mentioned as a priority.

State and Region ECD Offices

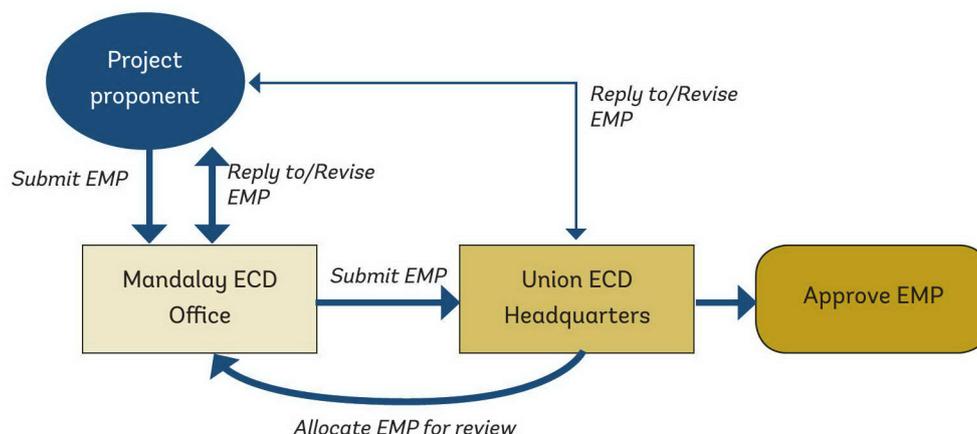
To determine the roles and responsibilities at the subnational level, interviews were conducted in November and December 2018 at the Mandalay, Sagaing, and Yangon offices. The interviews focused on the staff role in the review of EMPs, monitoring, inspection, and audit. EMPs are received by the state/region offices in the following two ways:

- (a) Proponents submit EMPs direct to Mandalay ECD.
- (b) Union-level ECD also sends EMPs from other states/regions to assist in review.

The second measure was introduced for states/regions to assist with the backlog of EMPs received. There seem to be some issues with this process, as once the state/region ECD office reviews the project/replies to the project proponent, the revised EMP is then sent to the union level for final approval (Figure 34). Both state/region and union levels may 'reply to' and request additional information from the proponent leading to potential delays in approval.

Figure 34

Process flow for receiving and reviewing EMP at the state/region level



In some cases, during the scoping and EIA investigation process, the ECD headquarters request the state/region ECD offices to go to sites and check the situation on the ground. State/region offices also assist the project proponents in following the Procedures in relation to public consultation. In the future, it is likely that the mandate will be extended for state/region offices to do the initial review for both EMPs and IEEs.

Mandalay Region ECD Office

There are currently 13 staff in the Mandalay ECD office; eight are responsible for reviewing EMPs, and there are five staff in the PCD. The Mandalay ECD director estimated that 154 EMPs had been received at the Mandalay ECD office and 72 had been reviewed (as of November 29, 2018). Staff from the Mandalay office and also academics from Mandalay universities had participated in the EIA review team meetings at the union level for projects proposed in the Mandalay region.

Two staff members are currently assigned from the Mandalay office to the ECD headquarters to join the task force to review the EMPs for the mining sectors. Normally, state/region staff are assigned to the union level on a three-month basis to assist with this process; four staff in total were assigned in 2018. Importantly, these staff members received training on IEE/EMP review and approval, so in the longer term, these staff will have improved capacity to review reports. Through the ADB and JICA projects, the team in Mandalay had also received training in reviewing EMPs and monitoring water quality and wastewater.

Most of the EIAs/IEEs/EMPs submitted in the Mandalay region are for the (a) cement industry, (b) oil and gas pipelines and storage facilities, (c) industry, and (d) mining sector. One of the main issues related to the mining EMPs is that they do not follow the proposed structure for stand-alone documents. Other issues across all sectors are that the baseline data are limited and that public consultation process is weak. ECD Notification No. 3/2018 was issued in January 2018, which requires factories in nine sectors to develop EMPs by October 31, 2018 or January 31, 2019, including around 200 factories in the Mandalay region; as of November 2018, only 9 EMPs have been submitted from these sectors.

The Mandalay ECD office provides support to project proponents in conducting stakeholder consultation, particularly in responding to local communities' concerns around the impacts of dust and air pollution from cement plants. Local communities complained directly to the President's Office, and monthly monitoring and inspection of the project was assigned by the DG of the ECD to the regional ECD office. It was reported that most of the cement plants align to the emission guidelines, but the cumulative impacts of multiple cement

plants in the same area is reported to be affecting air quality. The Mandalay Regional Government and the ECD now require cement plants producing more than 1,000 tons per day to set up continuous emissions monitoring system.

One issue with the monitoring process is that the PCD is required to inform cement plants and factories on the timing of their inspection, and some monitoring for cement plants is done at night, when emissions may be lower. The Mandalay office also has limited equipment to undertake monitoring; for example, wastewater samples from factories are sent to a laboratory in Yangon for testing.

There are plans to expand the textiles industry in Mandalay, and there is an urgent need to build a centralized wastewater treatment system and establish a process to collect and treat wastewater from small-scale operators. The ECD is also testing a constructed wetland to deal with wastewater issues. Local communities are concerned with water pollution from industry and the proposal to construct oil storage tanks near Inwa palace on the Ayeyarwady River. The Mandalay office made the following recommendations to improve the review and monitoring and inspection process:

- Extend capacity building for the ECD and sector agencies to include E&S consultants.
- Raise awareness of the importance of EMPs for private sector.
- Ensure that proponents are provided guidance on how to prepare stand-alone EMPs for the mining sector.
- Institute a process to deal with small-scale mining and ASM.
- Consider delegating authority for approval of EMP at the regional level.
- Establish regular inspections to ensure that the EMPs are being followed and provide guidance to sectors on what must be in place in terms of adequate environmental management.

Sagaing Region ECD Office

There are 17 staff in the Sagaing ECD office in Monywa; 7 are responsible for reviewing EMPs and 10 are PCD staff. One staff member is currently assigned to the ECD headquarter to assist with review of EMPs in the mining sector. As of November 30, 2018, 135 EMPs were submitted directly to the Sagaing ECD office and 20 were sent from ECD headquarters.

The Sagaing office reported that most of the EMPs submitted were of poor quality due to the inadequacy of sections on baseline, impact assessment, and mitigation measures and lack of public consultations. Related to ECD Notification No. 3/2018 for nine priority sectors, the Sagaing ECD office estimates that it applies to 46 enterprises. As of November 2018, only 10 EMPs have been received for foundry, distillery, sugar mills, and leather tanning.

The Sagaing ECD office aims to inspect each facility at least once a year. Due to complaints of local communities about air quality impacts and wastewater management by the sugarcane mills, including to the MOI, these are inspected more frequently, approximately three times a year; these inspections are done jointly with the PCD. The team has some equipment to measure basic water quality parameters (BOD and COD and a Hazscanner for air quality). Most of the mining sites are located in the Homalin township in the Sagaing region, which is difficult for the inspection team to travel to for inspection and monitoring due to its remoteness.

The development of the EIA for the Letpadaung copper mine and issuing the ECC were an important capacity-building exercise. The Letpadaung mine sends the six-monthly compliance report and monitoring reports to Sagaing and union-level ECD offices; no major issues of noncompliance have been reported or detected during site inspections. Staff members at the Sagaing office have also joined training with ADB on the development of the EIA guidelines for the mining sector.

As with the Mandalay region, staff have participated in the EIA review team meetings for projects located in Sagaing region. After the Sagaing ECD office approves the EMP, it is sent to the union level for another review and, in some cases, reply to project proponent for further information. As the review and approval are largely a paper-based system, it was acknowledged that it is difficult for the Sagaing office to know the status of the EIAs/IEEs/EMPs, and the union and state/regional offices maintain their own tracking spreadsheets.

Yangon Region ECD Office

The Yangon ECD office was established in 2012; there are currently 48 staff; 6 staff are responsible for the review of EMPs and 4 are PCD staff for inspection and monitoring. Permanent staff from the Yangon ECD office have been assigned to the Thilawa SEZ and 2 staff have been assigned to the MIC to assist in screening and the initial review of EIAs/IEEs/EMPs

As of December 6, 2018, 43 EMPs were submitted to the Yangon ECD, with 20 received from the ECD headquarters and 23 EMPs submitted directly to the ECD Yangon office, fewer than the Mandalay and Sagaing offices. The main sectors are industrial zones, infrastructure (road, rail, bridges, and ports), hotel, and housing. Some of the issues reported with the EMPs are insufficient information, incorrect format, weaknesses in articulation of mitigation measures, and lack of data for monitoring.

No ECCs have been issued for projects in Yangon. Staff have represented the Yangon ECD Office at the EIA review team for around 4–5 projects, including the EIA for Dala Bridge, Awba Agro-chemical process plant, and other EIAs for housing complexes. It was reported that some EIA reports need to go through three or four review team meetings before being approved.

Staff have participated in training at the ECD headquarters, but no training was provided specifically for the ECD Yangon office. Three staff have received training in reviewing EMPs for the mining sector and two for hydropower sector; however, these types of projects are not proposed in the Yangon region.

The team also carries out inspections; this is usually done on a regular (sometimes monthly) basis with the DICA Yangon office where around 30 of 600 enterprises are inspected. It is estimated that there are more than 600 enterprises registered with the MIC in Yangon, including construction projects, chicken farms, ICT facilities/activities, wastewater treatment plants, electricity substations and transmission lines, garment factories, and others. The Yangon ECD office estimated that ECD Notification No. 3/2018 applies to 542 factories; to date, only 15 EMPs have been received and are being reviewed for these sectors.

The Yangon ECD pointed out the need for capacity building and guidelines to prepare for the administrative review of IEE/EMP. Other training and capacity building requested was for reviewing EMP, site inspection and environmental audit training, IEE review, and foundation course for SEA or area-wide impact assessment. Additional monitoring equipment and laboratory are also needed to enhance the inspection and monitoring role.

Sector Agencies

Sectoral agencies, like the DEPP, DOM, and the MOGE were consulted on their experiences with the EIA review and approval and the links with the ECD.

DEPP

The DEPP recognize that the ECD does not have sufficient staffing and capacity to handle the large number of EIA reports submitted, and that some of the consultant firms are not qualified or experienced enough to prepare good-quality reports. Interestingly, they noted that the scope of work or budget provided to consultant firms from project proponents to prepare EIAs/IEEs is often not adequate. The DEPP reported that there is no ToR or

guidance for the scoping report, and in one case, the review of a scoping report by the ECD took around seven months.

The DEPP had experience with the EIA review team meeting and commented that some of the members did not have relevant experience or capacity to do the technical review for energy development projects. They reported that some review team members do not make time to review the report before the meeting and make comments on the spot. The DEPP staff recommended that, in the longer term, the review team is phased out and instead the ECD should focus on enhancing its internal capacity. To improve the process, the staff recommended that a focal point should be appointed in sector ministries and departments for better communication between sector agencies and the ECD.

The DEPP estimated that it has submitted around 20 reports to the ECD, and to date, only 4 or 5 have been 'approved' but no ECC issued as of November 2018. Improving the ECD capacity to do the initial review could make the process more efficient. In some cases, the project proponent cannot manage to revise the report in line with comments provided on time. For joint venture projects (for example, the Memorandum of Understanding [MOU] with the DEPP), the EIAs/IEEs are submitted directly from the DEPP to the ECD. The staff mentioned that it is challenging for state-owned enterprises to prepare EIA and EMP reports due to limited budget, especially as budgets need to be requested from the union level up to six months in advance.

The DEPP was the lead agency under the MOEE for the implementation of the IFC-funded SEA of hydropower sector in Myanmar. It participated in the process to develop the EIA guidelines for hydropower. In addition, the Government of Norway provided support in setting up an E&S team within the MOEE.

DOM

The DOM is a licensing authority for mines under MONREC and reported that in 2016, the ECD issued an instruction requiring preparation of stand-alone EMPs for mining. These EMPs have been prepared by former mining experts and retired DOM staff who have no experience in preparing an EIA, IEE, or EMP. They estimated that there are around 1,500 mining blocks; in addition, there may be up to 20,000 blocks under the small-scale gem and jewelry enterprises.

The DOM were concerned about the Mines Rules (2018) which require ASM license-holders to prepare EIAs/IEEs/EMP and have ECCs issued. The Mines Rules (2018) specifies that ASM needs to get an ECC or Approval Letter conflict with Annex 1 of the Procedures. The licensing for ASM has been devolved to state/region governments. There have also been some issues in applying the stand-alone EMP requirements to the prospecting and exploration phases that may not have significant impacts. The DOM is working with the ECD to prepare a simplified format for these different phases.

The DOM has been involved in the preparation and review of the EIA guidelines for the mining sector and compliance activities associated with the Letpadaung copper mine. There is an E&S management team that could assist in review and inspections in the future.

MOGE

In the oil and gas sector, the project proponents submit EIAs/IEEs to the MOGE, and the MOGE submits these directly to the ECD for review and approval. The review and approval process can take around 7–8 months and up to two years, with noted improvements in the recent period. The MOGE recognized that the ECD is a new agency and is still building up human resources and capacity. To help improve the process, the MOGE formed a technical team to be involved in the EIA review team and has been involved in stakeholder consultations in the preparation of the EIA guidelines for the oil and gas sector. The MOGE representatives were also appointed at base stations for oil and gas operations to help coordinate and deal with environmental and other issues.

Civil Society Organizations

Due to the issues around the disclosure of EIA reports and public consultation workshops associated with EIA/IEE preparation, CSOs have only had limited experience with the EIA system in Myanmar. In December 2017, the MCRB and VLS held a workshop for CSOs in Yangon, attended by 25 participants, including representatives from Rakhine, Shan, Mandalay, Mon, Sagaing, Kayah, Karen, Kachin, and Magway, as well as a representative from the ECD. One of the key objectives of the workshop was to review the first two years of the implementation of the Procedure, lessons learned, and feedback from CSOs for future improvement. The participants observed the following:

- **Performance of the EIA system.** 82 percent identified that a lot needed to be done to improve implementation.
- **Most important problems.** 50 percent identified lack of consultation and 22 percent identified the failure of projects to comply with the Procedures as key problems.
- **Greatest needs for CSOs in Myanmar.** 59 percent identified the need for general training on EIA and indicated interest in specific issues around hydropower and mining sectors.
- **Public access to EIA.** Two-thirds of participants had never read an EIA report and one-third had read one.
- **Challenges to effective participation.** 47 percent identified not receiving enough information about a project as the main challenge to participation. Another 29 percent identified a challenge of the GAD not inviting formally registered CSOs to participate in public consultations.
- **Effective grievance mechanism for communities.** There are limited projects with effective grievance mechanisms. CSO representatives proposed using the following as mechanisms for communities to raise grievances: Facebook (33 percent), telephone hotline (17 percent), village suggestion box (17 percent), and raising problems with a local volunteer or project representative (33 percent).

The SEA of the hydropower sector included regional river basin consultations and engagement with CSOs and local communities. Local CSOs reported a lack of transparency and limited public participation in EIAs for many HPPs. They indicated that reports were often not disclosed to the public and that the EMPs were not properly enforced or monitored. Many recommendations were made to strengthen the EIA process by

- Incorporating local knowledge, community concerns, and livelihood issues into the EIA process and decision making;
- Assessing impacts and developing mitigation plans and livelihood restoration programs in consultation with affected communities;
- Conducting social baseline research, covering health, education, gender, ethnic minority groups, and social welfare;
- Developing communication mechanisms between government, hydropower developers, and local communities;
- Improving capacity and allocating budget for environmental monitoring and management;
- Recognizing that the presence of armed groups and conflict in some areas makes it difficult to conduct the in-depth research required for EIA preparation; and
- Promoting public participation and including stakeholder views in the EIA and providing related training to local communities.

The SWIA for the mining sector also revealed that the public participation carried out as part of the EIAs to date had several limitations, such as information provided being too technical for participants to understand and/or consultations not being carried out in local language(s) (MCRB 2017). It was not clear how community views

are taken into consideration in project planning and impact management, including the consideration of project alternatives.

Summary

The key findings are grouped by the key steps in the Procedures with survey results and information from face-to-face meetings with the five main stakeholder groups: the EIA Division staff, third party, E&S consultants, companies (project proponents), and CSOs (Table 19).

Table 19

Priorities identified for EIA review, approval, and compliance

Key steps in the Procedure	Priorities for improving EIA review, approval, and compliance
Screening	Review the project proposal quickly to start EIA/IEE investigation. Determine whether the MIC permit and ECD project proposal could be combined.
Tracking status of submissions	Establish and maintain an online system to track the status of EIA/IEE/EMP submissions and to improve workflow for the EIA Division staff. Consider a risk-based approach for categorizing projects for review. Provide a mechanism for the EIA Division and project proponent to interact online.
IEE report	Improve the quality of the IEE report submitted. Ensure initial comments are provided within the required time frame.
Scoping (for EIA)	Develop guidance for the scoping report. Ensure comments are provided on the scoping report within the required time frame so approach and methodology are agreed and approved by the ECD in time to inform the EIA process.
EIA report	Enhance the quality of EIA reports submitted. Ensure project proposal and scoping report are submitted and approved before the EIA. Provide capacity building and training for ECD staff, E&S consultants, and project proponents.
EMP	Delegate authority for approvals for EMP to director level and/or state/regional ECD offices. Improve the quality of the EMP submitted. Provide guidance on stand-alone EMPs for small-scale operations.
Public disclosure	All EIAs/IEEs/EMPs must be publicly disclosed to promote transparency and increase accountability and generate lessons learned.
Stakeholder consultation	Ensure public participation at key steps of the EIA/IEE.
Administrative (or initial) review	Ensure review is provided within the required time frame. Develop a standard template for providing and responding to comments. Mandate independent or third-party review for complex, high-risk, or sensitive projects. Consider delegating authority for lower-risk projects to the director level.
EIA review team meeting	Determine which EIAs must be reviewed by the review team. Restructure the membership of the review team. Collate all comments in writing before the meetings. Provide sufficient advance notice of the meeting to project proponents (at least one week).
ECC issuance	Develop template for the ECCs that can be used by the ECD. Speed up the ECC issuance process.
Inspection, monitoring, and audit	Increase on-the-ground inspection, monitoring, and audit. Mobilize effective resources and equipment for monitoring. Devolve responsibilities to states/regions and the PCD.

Annex 3. Survey results for EIA Division

Step	Questions and responses				
Screening	Project proponents submit project proposals.				
	Always	Usually	Sometimes	Rarely	Never
	18.8% (3)	31.3% (5)	25.0% (4)	25.0% (4)	0
IEE	Project proponents submit project proposals.				
	Always	Usually	Sometimes	Rarely	Never
	20.0% (3)	13.3% (2)	46.7% (7)	20.0% (3)	0
	Project proponents disclose information about the project and IEE.				
	Always	Usually	Sometimes	Rarely	Never
	13.3% (2)	6.7% (1)	20.0% (3)	53.3% (8)	6.7% (1)
	Quality of IEE reports submitted				
	Very good	Good	Acceptable	Poor	Very poor
	0	0	37.5% (6)	56.3% (9)	6.3% (1)
	IEEs follow the proposed structure in EIA Procedure (2015).				
	Always	Usually	Sometimes	Rarely	Never
	12.5% (2)	31.3% (5)	25.0% (4)	31.3% (5)	0
	Project proponents disclose their IEE report.				
	Always	Usually	Sometimes	Rarely	Never
	0	13.3% (2)	13.3% (2)	73.3% (11)	0
Project proponents conduct consultations on their IEE.					
Always	Usually	Sometimes	Rarely	Never	
0	14.3% (2)	28.6% (2)	57.1% (4)	0	
Scoping report for EIA	Project proponents submit third-party registration during the scoping phase.				
	Always	Usually	Sometimes	Rarely	Never
	18.2% (2)	27.3% (3)	45.5% (5)	9.1% (1)	0
	Project proponents submit the scoping report and ToR before submission of the EIA.				
	Always	Usually	Sometimes	Rarely	Never
	36.4% (4)	9.1% (3)	27.3% (3)	18.2% (2)	0
	Quality of scoping reports submitted				
	Very good	Good	Acceptable	Poor	Very poor
	0	18.2% (2)	36.4% (4)	45.5% (5)	0
	Project proponents disclose scoping report and conduct consultations.				
Always	Usually	Sometimes	Rarely	Never	
30% (3)	10% (1)	0	50% (5)	10% (1)	

Step	Questions and responses				
EIA	EIAs submitted follow the proposed structure in the EIA Procedure.				
	Always	Usually	Sometimes	Rarely	Never
	18.2% (2)	18.2% (2)	54.6 % (6)	9.1% (1)	0
	Quality of the EIA reports submitted				
	Very good	Good	Acceptable	Poor	Very poor
	0	9.1% (1)	36.4% (4)	54.6% (6)	0
	Appointing technical specialists would improve the EIA review process.				
	Strongly agree	Agree	Undecided	Disagree	Strongly disagree
	36.4% (4)	63.6% (7)	0	0	0
	Adopting a team approach to the EIA review could improve the process.				
	Strongly agree	Agree	Undecided	Disagree	Strongly disagree
	45.5% (5)	45.5% (5)	9.1% (1)	0	0
Project proponents disclose the EIA report to the public.					
Always	Usually	Sometimes	Rarely	Never	
9.1% (2)	0	27.3% (3)	45.5% (5)	18.2% (2)	
EMP	Quality of EMPs submitted				
	Very good	Good	Acceptable	Poor	Very poor
	0	0	66.7% (8)	25.0% (3)	8.3% (1)
Replying to Project Proponents	Feel pressured to complete the EIA review.				
	Strongly agree	Agree	Undecided	Disagree	Strongly disagree
	29.4% (5)	29.4% (5)	23.5 % (4)	11.8% (2)	5.9% (1)
Monitoring	Quality of the monitoring reports submitted.				
	Very good	Good	Acceptable	Poor	Very poor
	33.3% (2)	0	50.0% (3)	16.7% (1)	0
Capacity Building	Capacity to review EIAs has improved following the training.				
	Strongly agree	Agree	Undecided	Disagree	Strongly disagree
	28.6% (4)	57.1% (8)	14.3% (2)	0	0
Guidelines	Guidelines were a useful reference for reviewing EIA/IEE/EMP.				
	Strongly agree	Agree	Undecided	Disagree	Strongly disagree
	25% (4)	68.8% (11)	0	6.3% (1)	0

Annex 4. Survey results for E&S consultants

Step	Questions and responses				
Screening	Project proponents submit project proposals.				
	Always	Usually	Sometimes	Rarely	Never
	0.381	33.3% (7)	23.8% (5)	4.8% (1)	0
IEE	Project proponents inform the ECD of the person/organization preparing the IEE.				
	Always	Usually	Sometimes	Rarely	Never
	60% (12)	10% (2)	0	0	30% (6)
	Project proponents disclose information about the project and IEE.				
	Always	Usually	Sometimes	Rarely	Never
	38.1% (8)	42.9% (9)	19.1% (4)	0	0
	Conduct and record the results of public consultation.				
	Always	Usually	Sometimes	Rarely	Never
	81.8% (18)	13.6% (3)	4.6% (1)	0	0
	Follow the proposed structure in the EIA Procedure for the IEE reports.				
	Always	Usually	Sometimes	Rarely	Never
	66.7% (14)	33.3% (7)	0	0	0
	Project proponents disclose the IEE report within 15 days of submitting.				
	Always	Usually	Sometimes	Rarely	Never
	13.6% (3)	36.4% (8)	18.2% (4)	18.2% (4)	13.6% (4)
Project proponents arrange a public consultation to present the finding.					
Always	Usually	Sometimes	Rarely	Never	
28.6% (6)	33.3%(7)	4.8% (1)	23.8% (5)	9.5% (2)	
Scoping report for EIA	Project proponents submit consultant registration during the scoping phase.				
	Always	Usually	Sometimes	Rarely	Never
	65.2% (15)	30.4% (7)	4.4% (1)	0	0.00%
	Project proponents submit the scoping report and ToR before submission of the EIA.				
	Always	Usually	Sometimes	Rarely	Never
	73.9% (17)	13.0% (3)	13.0% (3)	0	0.00%
	Project proponents disclose the scoping report and conduct consultations.				
	Always	Usually	Sometimes	Rarely	Never
	39.1% (9)	30.4% (7)	17.4% (4)	4.4% (1)	8.7% (2)

Step	Questions and responses				
EIA	Conduct and record the results of public consultation.				
	Always	Usually	Sometimes	Rarely	Never
	93.8% (15)	0	6.3% (1)	0	0.00%
	Follow the proposed structure in the EIA Procedure.				
	Always	Usually	Sometimes	Rarely	Never
	75.0% (12)	18.8% (3)	6.3% (1)	0	0.00%
	Within 15 days of submission, the project proponents disclose the EIA report.				
	Always	Usually	Sometimes	Rarely	Never
	23.5% (4)	23.5% (4)	23.5% (4)	0.059	23.5% (4)
	Project proponents arrange a public consultation to present the findings of the EIA report.				
	Always	Usually	Sometimes	Rarely	Never
	50.0% (8)	18.8% (3)	18.8% (3)	12.5% (2)	0.00%
EIA review team	Provided adequate comments and time before the review team meeting.				
	Always	Usually	Sometimes	Rarely	Never
	23.1% (3)	7.7% (1)	7.7% (1)	46.2% (6)	15.4% (2)
3rd Party review	The third-party review was an effective process.				
	Strongly agree	Agree	Undecided	Disagree	Strongly disagree
	10% (1)	50% (5)	30% (3)	0	10% (1)
EMP	Proposed structure in the EIA Procedure.				
	Always	Usually	Sometimes	Rarely	Never
	53.3% (8)	26.7% (4)	20% (3)	0	0.00%
Capacity Building	Capacity to prepare EIA/IEE/EMP has improved following the training.				
	Strongly agree	Agree	Undecided	Disagree	Strongly disagree
	23.1% (6)	53.9% (14)	23.1% (6)	0	0.00%
Guidelines	Guidelines were a useful reference for preparing EIA/IEE/EMP.				
	Strongly agree	Agree	Undecided	Disagree	Strongly disagree
	30.8% (8)	61.5% (16)	7.7% (2)	0	0.00%

Annex 5. Previous assessments of EIA systems in Myanmar

Needs Assessment for the Effective Implementation of the ECL

The 'Needs Assessment for the Effective Implementation of the ECL 2012' was carried out by the UNDP. This assessment was done at the union level with the 4–5 staff in the EIA Branch (now the EIA Division) in the ECD responsible for reviewing EIAs and IEEs (this was before transferring some responsibilities to the state/regions). Up to October 2014, the ECD had reviewed only 63 scoping documents, 7 IEE reports, 3 EIA reports, and 2 EMPs (UNDP 2016).

This assessment predicted that the workload related to the EIA review would increase significantly and that the EIA Branch would not be able to deal with the influx of the EIA/IEE/EMP reports while meeting the strict timelines of the draft EIA Procedure (2015). Concerns were raised about the technical capacity of the ECD to review the reports and to manage the administrative tasks for receiving the reports for review and replying to project proponents.

To meet these challenges, the UNDP stressed the need for additional resources, technical support, training, and strong management of the review process, including the possible prioritization of high-risk projects. A need for a functioning document control system for tracking reports and capacity development on socioeconomic impacts was also highlighted. The review recommended that sector guidelines for oil and gas, mining, hydropower, industry, SEZs, and infrastructure be prepared, as well as standards and guidelines for small-scale operations. The assessment also called for intensive EIA capacity building within the ECD at the union and state/region levels and with other sectors and E&S consultants.

ADB Assessment of Environmental Safeguard Capacity

Before the introduction of the EIA Procedure (2015), the ADB also carried out an assessment of the environmental safeguard capacity in Myanmar (TA 8786-MYA Environmental Safeguards Institutional Strengthening), including the legal and regulatory framework, environmental assessment guidelines and technical standards, administrative procedures, human resources, and budget (ADB 2016). The assessment prioritized the need for (a) sector guidelines, (b) environmental quality guidelines, (c) capacity building for sector agencies, and (d) a capacity development plan for the ECD.

The survey of staff before implementation highlighted that the staff responsible for the review of the EIA reports could not devote their full time to this task due to other duties and did not have the relevant sector expertise, and reports were of inadequate quality (up to 90 percent were of poor quality).

The assessment raised concerns that the Environmental Control Department (now the EIA Division) had limited capacity and resources to undertake the effective review of the IEE and EIA reports. At the union level, there was only a small group (less than 10 staff) responsible for the administration of the EIA process, facing issues of excessive workload, lack of technical experience, and limited capacity for supervision and monitoring. The following EIA and sector guidelines have been drafted and awaiting approval: (a) EIA review and ECC, (b) technical guidelines for EIA, (c) oil and gas, (d) hydropower, (e) mining, and (f) public participation. The SIA and guidelines for roads/highways and tourism are still outstanding.

World Bank Safeguard Capacity Assessment

The World Bank safeguard capacity assessment found that while the environmental legislation has improved, there were gaps in implementation capacity. It found that further regulatory improvements were needed to improve E&S performance. To support the legislation, further clarity was found to be needed in terms of the overall EIA technical guidance, sectoral application of the EIA Procedure, and particularly monitoring and enforcement. A variety of factors were identified that limit the government capacity to implement the legislation, including staffing (skills and size), budget, infrastructure and equipment, mobility and field presence, clarity of mandate, and availability of effective enforcement tools. The regulatory systems for the management of socioeconomic impacts were found to be relying on the use of IFIs' policies to substitute for the absence of comprehensive domestic laws. This had resulted in a fragmented and confusing landscape of laws, regulations, and standards in which to manage resettlement, indigenous people's issues, gender, and social inclusion. The assessment recommended the following:

- Strengthening the operational capacity of the ECD to review, approve, and follow up with regulatory and enforcement actions on E&S assessment and manage documentation and instruments
- Enhancing effective coordination within MONREC and with sector ministries and departments on cross-cutting E&S management issues
- Integrating all land acquisition and resettlement processes into a consolidated regulatory and institutional framework

Oil and Gas Sector

An evaluation of the EIA system in the oil and gas sector (Aung 2017) found that there were no sufficient resources and capacity within the ECD to review the EIAs, and only a limited number of qualified E&S consultants in Myanmar. Some of the challenges identified in the oil and gas sector were

- Poor coordination between sectors in EIA system,
- Projects approved without screening process or proponents downplayed or split into smaller projects to avoid EIA,
- No specific method for carrying out the scoping phase and limited public participation,
- Inadequate budget and time frame to complete EIA investigation, and
- Social and biodiversity impacts not addressed.

The review found that the EIA system has a sound legal and administrative framework; however, issues remain with implementation. This is common in developing countries as a result of limited human resources, institutional capacity, and overall environmental awareness of government and general public (Aung 2017).

Australian-Myanmar Chamber of Commerce Responsible Industry Working Group (RIWG)

In July 2018, AustCham Myanmar wrote to the vice presidents responsible for the private sector and environment and climate change expressing concerns over insufficient clarity and effectiveness of the EIA process, resulting challenges for the private investors, and ineffective management of E&S impacts from investments and offering a number of recommendations and assistance to address the situation. The Responsible Industry Working Group (RIWG) brings together leaders from Australian and Myanmar businesses, NGOs, and the Australian

Government. The RIWG was concerned that the integrity and value of the integrity of the EIA process was being damaged by

- The lack of technical expertise, experience, and capacity of the ECD and the EIA review team to effectively review and approve reports;
- Limited technical expertise and professionalism of some E&S consultants;
- Lack of transparency and disclosure of reports by some project proponents, as well as by the government, and the need for a public online database; and
- Commissioning of a number of EMPs for existing projects without adequate guidance for their preparation.

The RIWG has offered assistance to MONREC to improve the EIA system.

Effectiveness of the EIA System in Myanmar

In August 2018, U Sang Aung Thu, currently a deputy director in the EIA Division completed a master's thesis at the University of Seoul on 'Improving the Effectiveness of Environmental Impact Assessment System in Myanmar Based on the Integrated Holistic Approach'. This research coupled with practical experience working in the EIA Division provides unique insights on the current issues and how the system can be improved. The key finding was that the implementation of Myanmar's EIA system still requires significant improvement due to the limited institutional capacity to effectively review EIAs, the performance of E&S consultants, and the quality of EIA submitted. The monitoring compliance and enforcement post EIA is currently the most deficient part of the system (Thu 2018).

In relation to the institutional capacity, the key findings included (a) inadequate physical and human resources for an effective EIA system, (b) staff not having relevant technical experience, (c) significant limitations in the capacity and commitment of the EIA review team, and (d) lack of technical EIA guidelines for various economic sectors.

Annex 6. Urgent actions identified by the ECD

Issue	Urgent actions required
EIA review process	<ul style="list-style-type: none"> • Develop a checklist to screen reports; if not satisfactory, then a quick reply can be issued for the project proponent to revise and resubmit. • Prioritize reports using a risk-based approach and categorize the reports as public/private/grant or loan, by sector, new or revised version, state/region, and so on. • Deputy director and assistant directors use a checklist to quickly review and issue comments on the EIA reports. • Complete administrative and technical review as two separate tasks. • Prepare standard template for the project proponents to revise reports in accordance with the ECD comments.
Training, capacity building, and sectoral guidelines	<ul style="list-style-type: none"> • Finalize the EIA guidelines for specific sectors (which are currently under development) to assist in the review process. • Arrange on-the-job training (that is, EIA Clinic) on reviewing the (prioritized) reports at the union level and include state/region ECD offices. • Arrange on-the-job training for the new staff to build their capacity on reviewing the EIA reports.
Human resources and staffing	<ul style="list-style-type: none"> • Assign staff from other divisions of the ECD to assist in the EIA review. • Allocate the EIA reports based on the academic background skills and experience of the EIA Division staff. • Review the reports as a group rather than individual staff.
Involve state/region ECD offices and sector ministries/ departments	<ul style="list-style-type: none"> • EMP reports will be sent to state/region ECD offices for assessing and initial comments. • Coordinate with the MGE to remove EMP reports from the system in cases where licenses have expired in the gem and jewelry sector.
Outsourcing to third-party reviewers	<ul style="list-style-type: none"> • Engage third-party reviewers to assist with the review of reports for mining or other high-risk projects with the costs to be covered by the project proponent (Section 43, 69, and 82 of the EIA Procedure).

Annex 7. Development partner support to the ECD

No	Development partners	Priorities for improving EIA review, approval, and compliance
1	ADB	'TA8786- Environmental Safeguard Institutional Strengthening' included a suite of training courses, development of environmental assessment and mining sector guidelines, technical review of EIA reports, and environmental lawyer engaged to prepare the ECC.
2	UDNP	Review of environmental assessment framework in 2016 with the Government of Finland. Currently providing third-party reviewers and looking to engage a senior management advisor to assist the DG of the ECD.
3	IFC	Implementing the SEA of the hydropower sector and development of the ESIA guidelines for the hydropower sector. Training provided to the ECD, E&S consultants, and the private sector on IFC PSs.
4	World Bank Group	The CEA includes this EIA systems review and setting up of the SLC for further capacity building.
5	JICA	Reference database and tracking spreadsheet developed through 'the Project for Capacity Development in Basic Water Management and EIA System'.
6	NEA	Ongoing support to the ECD in third-party review of the EIAs and capacity building and training in the oil and gas sectors, including development of the EIA guidelines. Also, starting a new activity to revise the ECC template.
7	WWF	Ad hoc technical review of the ESIA and support providing biodiversity training for the ECD in relation to the preparation and review of the ESIA.
8	MCRB	Providing capacity building and training on public participation and biodiversity and improving the EIAs with CSOs and E&S consultants.
9	VLS	'EIA Clinics' or one-on-one mentoring of the EIA Division staff to review the EIA. Development of the Draft Public Participation Guidelines.
10	AVI	Currently providing two AVI coachings for reviewing the EIA reports and English teaching to the ECD staff.
11	Flora and Fauna International (FFI)	Drafted guidelines for assessing Karst habitats as part of the ESIA.
12	Care Myanmar	Drafting guidelines for the IEE/EMP for rubber processing.
13	UNEP	Starting a program to simplify the ECC.
14	Netherlands Commission for Environmental Assessment	Providing SEA training program and supporting the ECD with SEA Training of Trainer (TOT) program.

