

APPENDIX 8

REFERENCES

8-1. ENVIRONMENTAL IMPACT ASSESSMENT PROCEDURE

ENVIRONMENTAL IMPACT ASSESSMENT PROCEDURE

The Government of the Republic of the Union of Myanmar

Ministry of Environmental Conservation and Forestry

Notification No. 616 / 2015

Nay Pyi Taw, the 3rd Waning Day of Nadaw, 1377 M.E.

(29 December, 2015)

The Ministry of Environmental Conservation and Forestry, in exercise of the power conferred by sub-section (b) of Section 42 of the Environmental Conservation Law, hereby issues the following Procedure.

CHAPTER I.

Title and Definitions

1. This Procedure shall be called the **Environmental Impact Assessment (EIA) Procedure**.

2. The expressions contained in this Procedure shall have the same meanings as are assigned to them under the Environmental Conservation Law and Rules. In addition thereto, the following expressions shall have the meanings given hereunder:

(a) **Project** means any commercial, economic, agricultural, social, academic, scientific, political or other project, activity, program, business, service or undertaking, whether regarded individually or in the aggregate, the performance of which requires any approval or is licensed, restricted, or otherwise regulated to any extent by any part of the Union Government and which may have an Adverse Impact.

(b) **EIA Type Project** means a Project judged by the Ministry as being likely to have potential for Adverse Impacts. It means generally those which:

Involve multiple components and many or varied pollution sources and/or pollutant types, requiring integrated EMP to be tailored specifically to mitigate such pollution;

Are characterized by a high risk of significant, adverse environmental or social impact;

Are of a type or size for which there is a lack of prior knowledge and experience as to what the potential adverse impacts may be and their size or significance; or

Where the significance of the potential environmental or social impacts or the sensitivity/vulnerability of the recipients of those impacts requires a high level of environmental and social management expertise and skills, and continued strict control and supervision throughout the life of the Project.

(c) **Initial Environmental Examination or IEE Type Project** means a Project judged by the Ministry to have some Adverse Impacts, but of lesser degree and/or significance than those for EIA Type Projects. It means generally those which:

Are limited in scope or size;

Have well known environmental and social impacts that for the most part are temporary, local and reversible; or

Have impacts which can be mitigated and managed by well-proven and available technologies and practices but with respect to which specific controls, measures and alternatives must be assessed, designed and implemented.

(d) **Non IEE or EIA Type Project** means a Project which is neither an IEE Type Project nor an EIA Type Project.

(e) **Complex Project** refers to a Project that has substantial impacts on the environment, which may include impacts beyond the borders of the jurisdiction under consideration, or a cumulative impact on other projects, or in which complex technology is applied.

(f) **Project Affected Person or PAP** means a natural person, legal entity, or organization that is, or is likely to be, directly or indirectly affected by a Project or a proposed Project, including without limitation effects in the nature of legal expropriation of land or real property, changes of land category, and impacts on the ecological and environmental systems in the settlement areas of such person, entity or organization.

(g) **Adverse Impact** means any adverse environmental, social, socio-economic, health, cultural, occupational safety or health, and community health and safety effect suffered or borne by any entity, natural person, ecosystem, or natural resource, including, but not limited to, the environment, flora and fauna, where such effect is attributable in any degree or extent to, or arises in any manner from, any action or omission on the part of the Project Proponent, or from the design, development, construction, implementation, maintenance, operation, or decommissioning of the Project or any activities related thereto.

(h) **Environmental Impact** means the probable effects or consequence on the natural and built environment, and people and communities of a proposed Project or businesses or activities or undertaking. Impacts can be direct or indirect, cumulative, and positive or adverse or both. For purposes of this Procedure, Environmental Impacts include occupational, social, cultural, socio-economical, public and community health, and safety issues. Moreover, social impacts include Involuntary Resettlement and relating to Indigenous People.

(i) **Cumulative Impact** in relation to a Project means the impact or impacts of a Project that in itself or themselves may not be significant but may become significant when added to the existing and potential impacts eventuating from similar or diverse Projects or undertakings in the same geographic area or region.

(j) **Best Available Techniques or BAT** means the most effective and advanced stage in the development of activities and their methods of operation which indicate the practical suitability of particular techniques for providing in principle avoidance, prevention, reduction, mitigation and compensation as the basis for Emission Limit

Values designed to prevent and, where that is not practicable, generally to reduce emissions and the impact on the environment as a whole, where:

‘**Best**’ shall mean most effective in achieving a high general level of protection of the environment as a whole;

‘**Available**’ techniques shall mean those developed on a scale which allow implementation in the relevant industrial sector, under economically and technically viable conditions taking into consideration the cost and advantages, as long as they are reasonably accessible to the operator; and

‘**Techniques**’ shall include both the technology used and the way in which the installation is designed, built, maintained, operated and decommissioned.

(k) **Good Practice** means that practice which is recognized by a consensus of relevant stakeholders (including without limitation government, industry, labour, financiers, and academia) as having been adopted by leading, reputable companies of international standard, which is capable of being adhered to within the Republic of the Union of Myanmar, and which, when carried out by or in respect of the Project, can be expected further to reduce the Adverse Impacts arising from the Project and activities related thereto.

(l) **Alternatives** in relation to a proposed Project, means different realistic and feasible means of meeting the general purpose and requirements of the Project, which may include lower-impact alternatives to:

- i) the property on which or location where it is proposed to undertake the Project,
- ii) the type of Project to be undertaken,
- iii) the design or layout of the Project,
- iv) the technology to be used in the Project,
- v) the operational aspects of the Project, and
- vi) any other substantive characteristic or aspect of the Project as deemed necessary or appropriate by the Ministry.

(m) **Biodiversity** means the variability among living organisms from all sources including, inter alia, terrestrial, atmospheric, and marine and other aquatic ecosystems and the ecological complexes of which any such ecosystem is a part; this includes diversity within species, between species, and of ecosystems.

(n) **Emission** means the direct or indirect release of any emission from individual or diffuse sources into the air, water, land or any subterranean area. Emissions include emissions of solid waste, effluent, gas, noise, odor, light, radiation, vibration or heat.

(o) **Emission Limit Values** or **ELV** is a figure specifying the concentration or load of a pollutant allowed to be emitted or discharged to the environment from a specific installation in a given period of time or per unit of production.

(p) **IEE Report** means a report on an IEE Type economic activity prepared in accordance with the requirements stipulated in Article 36 and having a focus on: systematic identification and assessment of potential Adverse Impacts including Cumulative Impacts of the proposed Project, business, service or activity; systematic

assessment of feasible Project alternatives; and determination of appropriate measures to mitigate potential Adverse Impacts. IEE Report shall include an EMP.

(q) **EIA Report** means a report on an EIA Type economic activity prepared in accordance with the requirements stipulated in Article 63 and having a focus on: systematic identification and assessment of potential Adverse Impacts including cumulative impacts of the proposed Project, business, service or activity; systematic assessment of feasible Project alternatives; and determination of appropriate measures to mitigate potential Adverse Impacts. EIA Report shall include an EMP.

(r) **EIA Report Review Body** means that body to be formed by the Ministry in accordance with Article 58 of the Rules, comprising technical experts from relevant government departments, government organizations, technical organizations and civil society responsible to review and provide comments and recommendations on an EIA Report.

(s) **Construction Phase EMP** means a detailed and comprehensive EMP for the construction phase of a Project. Such plan shall present all relevant commitments, Emission Limit Values, Environmental Quality Standards and other environmental requirements. The plan shall include a description of the construction works, installations, and infrastructure, and shall present an overview of Adverse Impacts, present mitigation measures and monitoring programs together with time schedules, projected budget use, overview maps, images, aerial photos, satellite images, site layout plans, cross-sections, transects, environmental management and monitoring sub-plans for each construction site, thematic sub-plans, and management procedures, as appropriate.

(t) **Operational Phase EMP** means a detailed and comprehensive EMP for the operational phase of a Project. Such plan shall present all relevant commitments, Emission Limit Values, Environmental Quality Standards and other environmental requirements. The plan shall include a description of the Project operations, installations, and infrastructure, and shall present an overview of Adverse Impacts, present mitigation measures together with time schedules, projected budget use, overview maps, images, aerial photos, satellite images, site layout plans, cross-sections, transects, environmental management and monitoring sub-plans for each Project site, thematic sub-plans, and management procedures, as appropriate.

(u) **Environmental Compliance Certificate** or **ECC** is a document having legal effect, through which the Ministry approves an IEE Report, an EIA Report, or an EMP.

(v) **Indigenous People** means people with a social or cultural identity distinct from the dominant or mainstream society, which makes them vulnerable to being disadvantaged in the processes of development.

(w) **Involuntary Resettlement** means the mandatory physical displacement of a PAP from their home arising from a Project, or the unavoidable loss by a PAP of productive or income-generating assets occasioned by a Project.

(x) **Ministry** means the Ministry of Environmental Conservation and Forestry.

(y) **Department** means the Environmental Conservation Department.

(z) **Project Proponent** means any natural person, legal entity, or organization, from the public or private sector, intending to undertake, or having commenced to

undertake, as relevant, a Project or any aspect of a Project (including study, survey, design, development, pre-construction, construction, operation, decommissioning, closure, and post-closure) within the territorial borders of the Republic of the Union of Myanmar, and during the period of such undertaking which has an ownership interest (legal or equitable) in the Project, or which intends (or could reasonably be expected to intend) to derive financial or other benefits from the Project of the sort which an owner would ordinarily derive.

(aa) **Project Proposal** means a written document, in form, content and structure in accordance with the Ministry's requirements and guidance, accurately setting forth the key aspects and relevant details (including, inter alia, the nature and size of all known or foreseeable Adverse Impacts) of a Project or Project expansion, as the case may be, which a Project Proponent wishes to undertake, or having commenced to undertake.

(bb) **Rules** means the Environmental Conservation Rules.

(cc) **Residual Impacts** means predicted or actual Environmental Impacts that remain after mitigating measures have been applied, including after Project closure.

(dd) **Scoping** means the process contemplated in Chapter V of this Procedure for determining the scope of an EIA (i.e. the data that need to be collected and analyzed to assess the potential Adverse Impacts of a Project) and producing a terms of reference (ToR) for preparation of an EIA Report.

(ee) **Prior Permission** means the permission issued by the Ministry in respect of Projects listed in Annex 1 'Categorization of Economic Activities for Assessment Purposes', setting forth environmental conservation terms and conditions in accordance with Section 24 of the Law.

(ff) **Inspector** means any consultant assigned by the Ministry, and the Department's own officers at national, regional, state, Nay Pyi Taw Union Territory and/or local offices, to conduct monitoring and inspections of a Project and activities related thereto in order to control and determine compliance by the Project with all applicable environmental and socio-economical requirements and, where possible, to prevent violations of the Project's obligations according to the Procedure. The Ministry may also, for the implementation of monitoring and inspections, enlist the assistance of officers from other relevant government departments and organizations according to the Procedure.

(gg) **Strategic Environmental Assessment** refers to a range of analytical and participatory approaches that aim to integrate environmental into policies, plans and programs and evaluate the inter-linkages with economic and social considerations. The principle is to integrate environment, alongside economic and social concerns, into a holistic sustainability assessment.

CHAPTER II.

Establishment of the Environmental Impact Assessment Process

3. Pursuant to Section 21 of the Law and Articles 52, 53 and 55 of the Rules, all Projects and Project expansions undertaken by any ministry, government department, organization, corporation, board, development committee and organization, local government or authority, company, cooperative, institution,

- enterprise, firm, partnership or individual (and/or all Projects, field sites, factories and businesses including expansions of such Projects, field sites, factories and businesses identified by the Ministry, which may cause impact on environmental quality and are required to obtain Prior Permission in accordance with Section 21 of the Law, and Article 62 of the Rules) having the potential to cause Adverse Impacts, are required to undertake IEE or EIA or to develop an EMP, and to obtain an ECC in accordance with this Procedure.
4. Any Project, field site, factory or business which is identified by Section 21 of the Law and Article 62 of the Rules requires Prior Permission, including those which exist prior to the issuance of this Procedure.
 5. In accordance with Article 68 of the Rules, small-scale Projects, field sites, factories or businesses which are not specifically identified by the Ministry, but which may impact on environmental quality and as such are required to obtain Prior Permission in accordance with Section 21 of the Law or Article 62 of the Rules, and which are also not included in Annex 1 'Categorization of Economic Activities for Assessment Purposes', shall obtain the recommendation of the Department as to whether or not such a Project has Environmental Impacts and shall comply with the terms and conditions prescribed by the Department before applying for a permit or license from the relevant ministry or governmental organization.
 6. The ECC issued by the Ministry shall reflect any terms and conditions that are contained in any relevant Prior Permission.
 7. Projects that involve Involuntary Resettlement or which may potentially have an Adverse Impact on Indigenous People shall comply with specific procedures separately issued by the responsible ministries. Prior to the issuance of any such specific procedures, all such Projects shall adhere to international good practice (as accepted by international financial institutions including the World Bank Group and Asian Development Bank) on Involuntary Resettlement and Indigenous Peoples.
 8. Any Project already in existence prior to the issuance of the Rules, or the construction of which has already commenced prior to the issuance of the Rules, and which, in either case, shall be required to undertake, within the timeframe prescribed by the Department, an environmental compliance audit, including on-site assessment, to identify past and/or present concerns related to that Project's Environmental Impacts, and to:
 - a) develop an EIA or IEE or EMP;
 - b) obtain an ECC; and
 - c) take appropriate actions to mitigate Adverse Impacts in accordance with the Law, the Rules, and other applicable laws.
 9. Any Project already in existence prior to the issuance of the Rules, or the construction of which has already commenced prior to the issuance of the Rules, shall be required to carry out an IEE or EIA as determined by the Ministry in accordance with this Procedure in respect of any proposed extension or expansion of such Project which would increase the Project size or production or would necessitate additional construction, renovation, installation or other extension or expansion related activities, if the nature and scale of such extension or expansion are such that, regarded as an independent Project without reference to the nature or scale of the Project already in existence or under construction, they would have been

- subject to the requirement to carry out an IEE or EIA. If no IEE or EIA is required to be carried out in respect of such Project extension or expansion, then the EMP and ECC for such Project shall be revised as necessary within the timeframe prescribed by the Department to take into consideration such extension or expansion.
10. IEE or EIA Type Projects funded with external aid which have been approved by the Parliament prior to the issuance of the Rules and which must be implemented within a predetermined period of time, and IEE or EIA Type Projects implemented by any ministry or government organization by itself or cooperatively or jointly with other organization, shall:
 - a) if construction has already commenced prior to the issuance of the Rules, comply with Article 8 or shall,
 - b) if construction has not yet commenced prior to the issuance of the Rules, be required to carry out an IEE or EIA as this Procedure may require and within the timeframe prescribed by the Department, and shall obtain the relevant ECC prior to the submission of such Project to the Cabinet.
 11. Any expansion in respect of a Project implemented after the issuance of the Rules and which does not require an IEE or EIA (as the case may be), but such expansion would cause that Project to require an IEE or EIA (as the case may be), then the Department shall determine whether an IEE or EIA (as the case may be) of that Project shall be required and/or whether an updated, revised EMP shall be required, and then report to the Ministry.
 12. For any preliminary activities to be carried out by or on behalf of a Project Proponent before the Ministry has determined whether the Project is obliged to carry out an IEE or EIA, the Ministry shall have the right to establish and impose requirements with respect to those preliminary activities, which the Project Proponent shall be obliged to comply with as a prior condition to engaging in those preliminary activities such as to ensure that such preliminary activities do not cause Environmental Impacts.
 13. The Project Proponent shall:
 - a) arrange for appropriate public consultation through all phases of the IEE and EIA process as required by Articles 34, 50, and 61, and
 - b) disclose to the public in a timely manner all relevant Project-related information in accordance with this Procedure except that which may relate to National Security concerns as informed by the Ministry.
 14. The Ministry shall be responsible for the application and interpretation of this Procedure.
 15. The Ministry has the power and exclusive authority to:
 - a) define Project screening criteria;
 - b) approve technical guidelines for IEE and EIA;
 - c) review and approve IEE Reports;
 - d) provide guidelines for and approve the ToR of EIA;
 - e) review and approve EIA Reports;
 - f) review and approve EMP, Construction Phase EMP and Operational Phase EMP;

- g) determine and impose Environmental Impact related conditions which will be applicable to any approval of an IEE, EIA or EMP;
 - h) monitor and enforce compliance with the conditions set forth in an ECC and monitor and enforce the implementation of EMP, including any amendments thereof occasioned once the detailed design of the proposed Project has been finalized or by or on account of experience during implementation of the Project;
 - i) require any Project to update its EMP and to submit such updated EMP to the Ministry for review and approval according to a schedule defined by the Ministry;
 - j) identify and notify the registration conditions and/or procedures for a Third Person or Organization who wishes to undertake IEE or EIA; and
 - k) perform other duties and functions relating to IEE and EIA as stipulated by the Union Government.
16. The EIA Report Review Body shall have the following responsibilities:
- a) When requested by the Ministry, to review the EIA of any Project.
 - b) Within the timeframe prescribed by the Ministry, to prepare an EIA Review report in regard to an EIA Report.
 - c) In each case, prescribe the scope and content of the EIA Review report. Such scope and content may include, among other things, assessments of the following questions:
 - (i) Does the EIA Report comply with this Procedure?
 - (ii) Does the EIA Report comply with the Scoping Report and the ToR for the EIA?
 - (iii) Does the EIA Report comply with explicit guidelines, standards, timing and criteria for review?
 - (iv) Does the EIA Report recognize and consider the views of stakeholders?
 - (v) Is the EIA Report complete? Does it contain sufficient, suitable and reliable information?
 - (vi) Have all applicable environmental and social requirements been adequately identified, addressed, referred to and fully complied with in the preparation and content of the EIA Report?
 - (vii) Have all foreseeable Adverse Impacts been identified and addressed in the preparation and content of the EIA Report?
 - (viii) Is it likely that the measures to prevent, mitigate or minimize Adverse Impacts of the Project specified in the EIA Report will ensure that the environmental requirements will be fully complied with?
 - (ix) Are the measures to prevent or minimize pollution from the Project effective and based on BAT and Good Practice?
 - (x) Are there any measures or procedures which are non-compliant, or which risk leading to non-compliance, with environmental and social requirements?

- (xi) Can the Project as described and presented in the EIA Report be constructed and operated without causing unacceptable Adverse Impacts?
- d) The EIA Review report shall identify any defects in the EIA investigations or in the EIA Report and shall give recommendations as to which further studies, investigations, consultations or assessments the Project Proponent must undertake and report.
- e) The EIA Review report shall, where relevant, give recommendations on conditions of the ECC.
- f) If requested by the Committee or the Ministry, the EIA Report Review Body shall present its findings at a meeting.

Requirements concerning Third Person or Organization undertaking IEE and EIA

17.

- (a) If specific terms, conditions and/or registration procedures have not been separately issued by the Ministry, any Third Person or Organization, whether foreign or domestic, who wishes to prepare an IEE and EIA shall first apply to the Department together with the information and supporting evidence indicated below, to complete such registration. Such application shall include:
 - i) the name, contact address and profile of the person or organization,
 - ii) relevant experience of the person or organization, and
 - iii) for key personnel, an outline of each person's experience in the field of environmental assessment, academic credentials, relevant certificates and accreditations.
- (b) If specific terms, conditions and/or registration procedures have been separately issued by the Ministry, any Third Person or Organization who wishes to prepare an IEE or EIA shall first apply to the Department in accordance with the terms, conditions and/or procedures for such registration.

- 18. The Department will review the materials submitted by applicants seeking to be registered in accordance with Article 17, in order to determine each applicant's suitability to carry out such assessments. Based upon the materials submitted by an applicant, the Department may register the applicant as deemed to be suitable on payment of the application fee or may refuse to register the applicant if deemed to be unsuitable in accordance with Ministry guidance. Any applicant whose registration application has been rejected may re-apply for registration after the applicant has resolved or corrected the defect(s).
- 19. Registration, once completed, shall be valid for a period of three (3) years. Three (3) months prior to expiration of registration, the applicant may apply to the Department for an extension. The Department can extend the registration, with the approval of the Ministry, and on payment of the registration fee.
- 20. With the guidance of the Ministry, the Department may suspend or cancel the registration of any person or organization who has been registered in accordance with Article 18 or any prior requirements, and may impose such other corrective or punitive measures as may be lawfully available to it, if the Department determines

that such person or organization has violated any provision of Republic of the Union of Myanmar law, or if the assessments of such person or organization contain significant errors or are materially misleading or have not been prepared in accordance with recognized standards generally applicable to such work and services and/or relevant provisions of the Law, the Rules, this Procedure or other applicable Republic of the Union of Myanmar laws. A notification of suspension or termination of registration shall be issued.

21.
 - (a) No person or organization who/which has not been registered by the Department shall prepare, submit or allow the submission to the Ministry of any EIA Report contemplated in this Procedure.
 - (b) Persons or organizations who/which are in the process of preparing an EIA Report contemplated in this Procedure prior to the issuance of this Procedure are required to complete registration within three (3) months of issuance of the Procedure.
22. The Department shall maintain and publish from time to time a list of all persons and organizations who/which have been registered by the Department for the preparation of IEE Reports and EIA Reports.

CHAPTER III.

Screening

23.
 - (a) The Project Proponent shall submit the Project Proposal to the Ministry for Screening. In accordance with this Procedure, the submission of the Project Proposal for Screening is the same as the submission of an application for Prior Permission.
 - (b) The Ministry will send the Project Proposal to the Department to determine the need for environmental assessment.
 - (c) Following the preliminary Screening and verification that the Project Proposal contains all required documents and related materials, subject to Articles 8, 9, 10, 11, 26 and 27 the Department shall make a determination in accordance with Annex 1 'Categorization of Economic Activities for Assessment Purposes', taking into account Article 25 and the additional factors listed in Article 28 in order to designate the Project as one of the following, and then submit their designation to the Ministry:
 - i) an EIA Type Project, or
 - ii) an IEE Type Project, or
 - iii) A Non IEE or EIA Type Project, and therefore not required to undertake any environmental assessment.
24. The Ministry shall also make a determination whether an EMP shall be required in respect of any Project.

25. An EIA is required in all cases where the Project will be located in or will have foreseeable adverse effects on any legally protected national, regional or state area, including without limitation: (i) a forest conservation area (including biodiversity reserved area); (ii) a public forest; (iii) a park (including marine parks); (iv) a mangrove swamp; (v) any other sensitive coastal area; (vi) a wildlife sanctuary; (vii) a scientific reserve; (viii) a nature reserve; (ix) a geophysically significant reserve; (x) any other nature reserve nominated by the Minister; (xi) a protected cultural heritage area; and (xii) a protected archeological area or area of historical significance.
26. Notwithstanding any categorization set forth in Annex 1 'Categorization of Economic Activities for Assessment Purposes', the Ministry reserves the right to change the type of the Project as necessary, if the Ministry determines that special circumstances so warrant to require a Project that would otherwise be required to complete and submit an IEE or an EIA or to exempt a Project from completing any IEE or EIA assessment.
27. For purposes of Screening, the Ministry may at its discretion elect to treat Projects that are logically or economically linked, or which have the same or related proponents, or which are sequential in time, as a single Project. Components of basic infrastructure (such as an access road, transmission tower or waste disposal facility) that are required for a larger Project (such as a mine or a power plant) shall be considered to be part of that larger Project. In such circumstances, the Ministry may determine whether an IEE or an EIA will be required for the Projects that are treated as a single Project.
28. In accordance with Article 23, in making its determination as to the type of environmental assessment a Project or Project expansion will require, the Department shall in addition to the provisions in Article 25 and the type and size categorization in Annex 1 'Categorization of Economic Activities for Assessment Purposes' consider the following factors in accordance with Ministry guidance:
 - a) the need for the Project to deal with an emergency situation;
 - b) the interest of public health and safety;
 - c) the interest of national security;
 - d) the lifespan of the Project;
 - e) protection of cultural and religious norms, and historical and religious heritage;
 - f) protection of areas having a fragile ecosystem;
 - g) areas affected by cyclones, strong storms, flooding, earthquake (including the Sagaing Fault) and areas vulnerable to natural disaster;
 - h) protection of water resources (lakes, reservoirs, rivers, groundwater aquifers) that serve or may in the future serve as primary sources of public drinking water;
 - i) recreation zones and pearl production areas;
 - j) conservation and protection of biodiversity;
 - k) introduction of exotic or alien species;
 - l) adoption of new technologies;
 - m) population density;

- n) national, regional and global climate change conditions;
 - o) likely transboundary impacts;
 - p) likely residual impacts or effects occurring some years after Project closure; and
 - q) other factors as the Ministry may determine.
29. Within fifteen (15) working days of receiving the complete Project Proposal, the Department shall determine the type of environmental assessment (EIA, IEE, or none) which the Project will require, and the Department shall inform the Project Proponent in writing as to such determination in accordance with the Ministry guidance.
30. The Ministry shall periodically review and, as it may deem necessary, revise Annex 1 'Categorization of Economic Activities for Assessment Purposes'.

CHAPTER IV.

Initial Environmental Examination

31. The IEE process is outlined in the diagram set forth in Annex 2 'Environmental Assessment Procedure Flowchart'.
32. Prior to commencement of an IEE, the Project Proponent shall inform the Department in writing as to the identity of the person(s) and/or organization, if any, who will undertake the IEE and reporting. The Project Proponent may carry out the IEE and reporting by itself or may appoint a registered person or organization according to the Article 18 to do so.
33. Within seven (7) working days of its receipt of information about the identity of any proposed person(s) and/or organization selected by the Project Proponent to undertake the IEE, the Department will confirm in accordance with the Ministry approval whether such person(s) and/or organization are/is in good standing with the Department.
34. The Project Proponent shall undertake the following public consultation process in regard to an IEE Type Project:
- a) Immediately upon commencement of the IEE, disclose relevant information about the proposed Project to the public and civil society through the Project or Project Proponent's website(s) and local media, including by means of the prominent posting of legible sign boards at the Project site which are visible to the public, and comply with technical guidelines issued by the Ministry; and
 - b) arrange the required complement of consultation meetings as advised by the Ministry, with local communities, potential PAPs, local authorities, community based organizations, and civil society, and provide appropriate and timely explanations in press conferences and media interviews.

IEE Report Requirements

35. The Project Proponent shall issue a letter of endorsement in a format prescribed by the Ministry. Such letter shall be submitted to the Department together with the IEE

Report prepared either in the Myanmar language, or in the English language with an accompanying, accurate summary in the Myanmar language, and confirming:

- a) the accuracy and completeness of the IEE,
- b) that the IEE has been prepared in strict compliance with applicable laws including this Procedure, and
- c) that the Project will at all times comply fully with the commitments, mitigation measures, and plans in the IEE Report.

36. The IEE Report shall contain the following:

- a) Project description in reasonable detail with description of the project size, installations, technology, infrastructure, production processes, use of materials and resources, generation of waste, emissions and disturbances together with overview maps and site layout maps (using aerial photos and satellite images in proper scale) for each Project phase and, where relevant, project alternatives for each Project phase;
- b) identification of the Project Proponent including (where the Project Proponent is not a natural person but a company or other juridical entity) the identification of the owners, directors (if any) and day to day management and officers of the Project Proponent;
- c) identification of the IEE experts, including which expert is responsible for which part of the IEE Report;
- d) description of applicable laws, decrees, regulations, standards, guidelines and corporate policies related to environmental and social matters of the Project together with the relevant government agencies involved and their roles and responsibilities vis-à-vis the Project.
- e) description of the surrounding environmental and social conditions of the Project including maps of all relevant physical, biological, social, socio-economic and cultural features;
- f) identification and assessment of potential Environmental Impacts including assessment and description of Adverse Impacts and Residual Impacts with presentation of the spatial and temporal characteristics of the impacts using maps, images, aerial photos and satellite images;
- g) results of the public consultation and public participation processes, recommendations received from the public, and the Project Proponent's written responses to comments received during that process;
- h) the environmental protection measures of the Project which are intended to mitigate Adverse Impacts clearly presented together with applicable environmental and social requirements and any Residual Impacts;
- i) the EMP; and
- j) the persons, organizations and budgets needed for implementation of the EMP.

Submission of IEE Report

37. After completing all investigations and public consultation and participation processes required for IEE Type Projects, the Project Proponent shall submit the IEE Report for the Project to the Department in both digital form and complete paper copies, together with the required service fee as prescribed by the Department.
38. Not later than fifteen (15) days after submission of the IEE Report to the Department, the Project Proponent shall disclose the IEE Report to civil society, PAPs, local communities and other concerned stakeholders: (i) posting on the Project or Project Proponent's website(s), (ii) by means of local media (i.e. newspapers); (iii) at public meeting places (e.g. libraries, community halls); and (iv) at the offices of the Project Proponent.

Review and Approval Process for IEEs

39. Upon receipt of the IEE Report from the Project Proponent, the Department shall:
 - a) disclose the IEE Report to the public on the Ministry and/or Department website(s), and/or through other appropriate media;
 - b) invite comments and suggestions on the IEE Report from all relevant parties including relevant government organizations, institutions, civil society organizations, and PAPs, as appropriate;
 - c) arrange public consultation meetings at the local level, at which the Project Proponent shall present the IEE Report; and
 - d) collect and review all comments and recommendations received, and forward the same to the Ministry to enable it to make a final decision on approval of the IEE Report.
40. If it is determined by the Ministry that the IEE Report does not satisfy requirements, then the Project Proponent shall be called upon by the Department to undertake necessary amendments and/or to provide supplementary information as directed by the Ministry.
41. Upon completion of its review of the IEE Report, the Ministry shall;
 - a) approve the IEE Report, subject to any conditions it may prescribe, and issue an ECC; or
 - b) require that the Project carry out an EIA, citing the reasons for this decision and informing the Project Proponent of its decision; and, in either case
 - c) publicly disclose its decision.
42. The Department shall deliver the final decision of the Ministry within sixty (60) working days of receipt of an IEE Report. If the Ministry requires an IEE Report to be amended, then the due date for delivery of the Ministry's decision shall be extended accordingly.
43. All costs incurred in completing the IEE Report disclosure and review, including the public consultation process, shall be borne by the Project Proponent.

CHAPTER V.

Environmental Impact Assessment

EIA Process

44. The EIA process is outlined in the diagram in Annex 2.
45. The Project Proponent must appoint a registered Third Person or Organization to carry out the EIA investigation and reporting. Prior to commencement of the EIA, the Project Proponent shall inform the Department in writing as to the identity of the duly registered person(s) and/or organization it has selected to undertake the EIA investigation and reporting.
46. Within seven (7) working days of its receipt of information about the identity of the person(s) and/or organization selected by the Project Proponent to undertake the EIA, the Department will confirm in accordance with the Ministry approval whether such person(s) and/or organization are in good standing with the Department.

Scoping

47. All EIA Type Projects shall undergo Scoping.
48. The Project Proponent shall be responsible to ensure that the Scoping and the preparation of the ToR for the EIA Report are undertaken in a professional manner and in accordance with this Procedure and any applicable guidelines issued or adopted by the Ministry.
49. The Scoping of the proposed Project shall:
 - a) define the study area, area of influence, time boundaries, Project phases, and potential stakeholders;
 - b) start the process of understanding the applicable regulations and standards, and their context for Project design and completion of the EIA;
 - c) make a provisional identification of Environmental Impacts, focusing in particular on the environmental, social and health issues that need to be addressed in subsequent EIA studies;
 - d) provide an indication of the depth and breadth of the subsequent EIA investigations including what baseline data and information are required, what further studies and investigations must be carried out, and how such data collection, studies and investigations shall be undertaken;
 - e) provide an opportunity for consultants, relevant authorities, project developers, and interested and affected parties to express their views and concerns regarding the proposal before an EIA proceeds;
 - f) enable an efficient and comprehensive assessment process that saves time, resources, and costs and avoids delays; and
 - g) identify potentially affected communities and other stakeholders with an interest in the Project.
50. As part of the Scoping, the Project Proponent shall ensure that the following public consultation and participation process is carried out:

- a) disclose information about the proposed Project to the public and civil society through posting on the Project or Project Proponent's website(s) and local media, including by means of the prominent posting of legible sign boards and advertising boards at the Project site which are visible to the public; and
 - b) arrange the required complement of consultation meetings as advised by the Ministry, with local communities, potential PAPs, local authorities, community based organizations, and civil society, and provide appropriate and timely explanations in press conferences and media interviews.
51. The Project Proponent shall prepare a Scoping Report either in the Myanmar language, or in the English language with an accompanying, accurate summary in the Myanmar language, with the following content:
- a) Executive Summary
 - b) Context of the Project
 - c) Overview of the Policy, Legal and Institutional Framework
 - d) Project Description and Alternatives
 - e) Description of the Environment together with maps in proper scale indicating all relevant features, images, aerial photos and satellite images
 - f) Key Potential Environmental Impacts and Mitigation Measures
 - g) Public Consultation and Disclosure
 - h) Conclusions and Recommendations
52. Based on the Scoping, the Project Proponent shall prepare the ToR for the EIA investigations in accordance with applicable guidelines issued or adopted by the Ministry.
53. The Project Proponent shall submit the completed Scoping Report and ToR to the Department for review and approval.
54. Within fifteen (15) working days of receiving the complete Scoping Report and ToR, the Department, in accordance with Ministry guidance, shall either
- a) approve the Scoping Report and ToR with or without conditions, or
 - b) require the Project Proponent to revise the Scoping Report and/or ToR in accordance with comments of the Department.

EIA Investigation

55. The Project Proponent shall ensure that the EIA investigation properly addresses all Adverse Impacts and is undertaken in accordance with the ToR as approved by the Department.
56. The EIA investigation shall consider all biological, physical, social, economic, health, cultural and visual components of the study area, together with all pertinent legal matters relating to the environment, people and communities (including land use, resources use, and ownership of and rights to land and other resources) that may be affected by the Project during all Project phases including pre-construction, construction, operation, decommissioning, closure, and post-closure, and shall identify and assess all Adverse Impacts, risks, Cumulative Impacts and Residual

Impacts for environment, social and, if relevant, health that potentially could arise from the Project.

57. The investigations shall include all necessary data collection, technical studies, modeling, field surveys, field sampling, laboratory analysis, engineering designs and calculations, and consultations to determine and document that all feasible measures are taken to ensure that all Residual Impacts are within applicable limits and are acceptable to the Ministry and interested and affected persons.
58. The investigation shall also include an analysis of Alternatives. Such analysis shall include a description of each Alternative, and an assessment and comparison of the Adverse Impacts, required mitigation measures and Residual Impacts of the Alternatives.
59. The Project Proponent is obliged to use, comply with and refer to applicable national and international standards adopted by the Union Government and/or the Ministry, or, in the absence of relevant national or adopted international standards, such standards as may be agreed with the Ministry.
60. The EIA shall consider the views, concerns, and perceptions of stakeholders, communities and individuals that could be affected by the Project or who otherwise have an interest in the Project. The EIA shall include the results of consultations with the public, affected populations and other stakeholders on the environmental and social issues. The concerns raised during such consultations shall be considered in assessing impacts, designing mitigation measures, and in the development of management and monitoring plans.
61. As part of the EIA investigations, the Project Proponent shall undertake the following consultation process:
 - a) timely disclosure of all relevant information about the proposed Project and its likely Adverse Impacts to the public and civil society through local and national media, the website(s) of the Project or Project Proponent, at public places such as libraries and community halls, and on sign boards at the Project site visible to the public, and provide appropriate and timely explanations in press conferences and media interviews;
 - b) arrange consultation meetings at national, regional, state, Nay Pyi Taw Union Territory and local levels, with PAPs, authorities, community based organizations and civil society;
 - c) consultations with concerned government organizations including the Ministry, the concerned sector ministry, regional government authorities and others; and
 - d) field visits for the Ministry and concerned government organizations.

EIA Report Requirements

62. The Project Proponent shall issue a letter of endorsement in a format prescribed by the Ministry. Such letter shall be submitted to the Department together with the EIA Report prepared either in the Myanmar language, or in the English language with an accompanying, accurate summary in the Myanmar language, confirming:
 - a) the accuracy and completeness of the EIA;
 - b) that the EIA has been prepared in strict compliance with applicable laws including this Procedure and with the ToR for the EIA; and

- c) that the Project will at all times comply fully with the commitments, mitigation measures, and plans in the EIA Report.
63. The Project Proponent is responsible for the preparation of an EIA Report which shall contain the following:

1.0 Executive Summary

2.0 Introduction

- 2.1 Presentation of the Project Proponent
- 2.2 Presentation of the Environmental and Social Experts
- 2.3 Presentation of the Health Experts for Projects with Health Impacts

3.0 Policy, Legal and Institutional Framework

- 3.1 Corporate Environmental and Social Policies (if applicable)
- 3.2 Policy and Legal Framework, including existing applicable laws and rules, International Conventions, Treaties and Agreements, and national and international standards and guidelines
- 3.3 Contractual and other Commitments
- 3.4 Institutional Framework
- 3.5 Project's Environmental and Social Standards
- 3.6 Health Standards for Projects with Health Impacts

4.0 Project Description and Alternative Selection

- 4.1 Project Background
- 4.2 Project Location, overview map and site layout maps
- 4.3 Project Development and Implementation Time Schedules
- 4.4 Description of the project size, installations, technology, infrastructure, production processes, use of materials and resources and generation of waste, emissions and disturbances, including the devices and measures to control emissions and disturbances, all together with overview maps and site layout maps and design drawings for each Project phase (pre-construction, construction, operation, decommissioning, closure and post-closure)
- 4.5 Description of the selected Alternative(s) by Project phase (pre-construction, construction, operation, decommissioning, closure and post-closure)
- 4.6 Comparison and Selection of the preferred Alternatives

5.0 Description of the Surrounding Environment

- 5.1 Setting the Study Limits
- 5.2 Methodology and Objectives
- 5.3 Public Administration and Planning: Identification and summary of the main relevant elements in socio-economic development plans, spatial plans, and

sector plans at Union Government, State or Region, City and Township levels

- 5.4 Legally protected national, regional or state areas, including without limitation: (i) forest conservation areas (including biodiversity reserved areas); (ii) public forests; (iii) parks (including marine parks); (iv) mangrove swamps; (v) any other sensitive coastal areas; (vi) wildlife sanctuaries; (vii) scientific reserves; (viii) nature reserves; (ix) geophysically significant reserves; (x) any other nature reserve nominated by the Minister; (xi) protected cultural heritage areas; and (xii) protected archeological areas or areas of historical significance.
- 5.5 Physical Components: Description with data and maps of (i) topography; (ii) water resources; (iii) geology and soils, hydrology/hydrogeology; (iv) environmental quality; (v) climate; (vi) vegetation cover; and (vii) natural hazards including earthquakes, tsunamis, extreme weather events, flooding, drought, wildfires and others
- 5.6 Biological Components: Descriptions and maps on fauna and flora including abundance, spatial distribution of rare, endangered and vulnerable species, and species of economic and health/nutritional values, and maps and description of valued or sensitive environmental areas and habitats
- 5.7 Infrastructure and Services: Location and size or capacity of transport infrastructure, public utilities and services
- 5.8 Socio-Economic Components: Income and livelihoods, living conditions and access to public services and natural resources, land use maps, population distribution maps, maps and charts of other socio-economic indicators such as poverty, employment and education
- 5.9 Public Health Components: Mortality and morbidity, occurrence of diseases, accidents and injuries, and social health determinants
- 5.10 Cultural Components: Description and maps of cultural, historical, and religious sites, structures and objects, and objects with high aesthetic value; description of traditional knowledge and beliefs, and cultural practices
- 5.11 Visual Components including where applicable landscape, city scape and sea scape using three dimensional models

6.0 Impact and Risk Assessment and Mitigation Measures

- 6.1 Impact and Risk Assessment Methodology
- 6.2 Impact and Risk Identification, Assessment and Mitigation. For each Project phase (pre-construction, construction, operation, decommissioning, closure, and post-closure):
 - 6.2.1 Identification and assessment of potential Environmental Impacts including (i) physical, biological, social, socio-economic, health, cultural, and visual impacts; (ii) potential impacts on climate change such as greenhouse gas emissions and loss of carbon sinks or stocks; and (iii) identification of impacts of climate change on the Project based on available climate change predictions from designated national authorities or international scientific research bodies

- 6.2.2 Identification and assessment of the likelihood and severity of natural and industrial hazards relevant to the Project
- 6.2.3 The design, layout, functioning, management and implementation of appropriate impact and risk mitigation measures
- 6.2.4 Characterization and assessment of any Residual Impacts and risks and comparison with applicable regulations, standards and guidelines
- 6.2.5 Comprehensive monitoring plan
- 6.3 Relevant maps, aerial photos, satellite images in proper scale clearly indicating the location of sources of Adverse Impacts, the spatial and temporal distribution of such impacts and with reference to the Description of the Surrounding Environment, the components that are likely to be impacted and the nature of the impacts.

7.0 Cumulative Impact Assessment

- 7.1 Methodology and Approach
- 7.2 Cumulative Impact Assessment
 - 7.2.1 Brief description and map of relevant existing and future private and public projects and developments
 - 7.2.2 Identification and assessment of the potential cumulative impacts on the components in the surrounding environment and the Project's contribution to such impacts
 - 7.2.3 Determination of the leverage and influence that the Project may have over the significant and project related cumulative impacts
 - 7.2.4 Description of measures to mitigate the Project's contribution to the cumulative impacts

8.0 Environmental Management Plan

- 8.1 Project Description by Project phase (pre-construction, construction, operation, decommissioning, closure and post-closure)
- 8.2 Project's Environmental, Socio-economic and, where relevant, Health Policies and Commitments, legal requirements and institutional arrangements
- 8.3 Summary of Impacts and Mitigation Measures
- 8.4 Overall budget for implementation of the EMP
- 8.5 Management and Monitoring Sub-Plans by Project phase (pre-construction, construction, operation, decommissioning, closure and post-closure); the Management and Monitoring Sub-Plans shall address and satisfy all relevant environmental and social management and monitoring issues such as but not limited to noise, vibrations, waste, hazardous waste, wastewater and storm water, air quality, odor, chemicals, water quality, erosion and sedimentation, biodiversity, occupational and community health and safety, cultural heritage, employment and training, and emergency response

8.6 Content of each Sub-Plan

8.6.1 Objectives

8.6.2 Legal Requirements

8.6.3 Overview maps and site layout maps, images, aerial photos, satellite images

8.6.4 Implementation Schedule

8.6.5 Management Actions

8.6.6 Monitoring Plans

8.6.7 Projected Budgets and Responsibilities

9.0 Public Consultation and Disclosure

9.1 Methodology and Approach

9.2 Summary of consultations and activities undertaken

9.3 Results of Consultations

9.4 Further ongoing Consultations

9.5 Disclosure

Submission of EIA Report

64. After completing all investigations and public consultation and participation processes required for EIA Type Projects, the Project Proponent shall submit the EIA Report to the Department in both digital form and complete paper copies, together with the required service fee as prescribed by the Department.
65. Not later than fifteen (15) days after submission of the EIA Report to the Department, the Project Proponent shall disclose the EIA Report to civil society, PAPs, local communities and other concerned stakeholders: (i) by means of national media (i.e. newspapers); (ii) the website(s) of the Project or Project Proponent; (iii) at public meeting places (e.g. libraries, community halls); and (iv) at the offices of the Project Proponent.
66. Upon receipt of the EIA Report, the Department will make the EIA Report publicly available.

Review and Approval Process for EIA Report

67. Upon receipt of the EIA Report from the Project Proponent, the Department shall:
 - a) submit the EIA Report to the EIA Report Review Body for comment and recommendations;
 - b) invite comments and suggestions on the EIA Report from all relevant parties including involved government organizations, institutions, civil society organizations, and PAPs, as appropriate;
 - d) arrange public consultation meetings at national, regional, state, Nay Pyi Taw Union Territory and local levels where the Project Proponent shall present the EIA Report; and

- e) collect and review all comments and recommendations received, including those of the EIA Report Review Body, and forward the same to the Ministry to enable it to make a final decision on approval of the EIA Report.
68. If it is determined by the Ministry that the EIA Report does not satisfy requirements, then the Project Proponent shall be called upon by the Department to undertake the necessary amendments as directed by the Ministry. The Ministry shall deliver its final decision within ninety (90) working days of receipt of the EIA Report. In case of Complex Projects, or if the Ministry requires the EIA Report to be amended, then the timeline will be extended accordingly.
69. All costs incurred in completing the EIA Report disclosure and review, including the public consultation process, shall be borne by the Project Proponent.
70. Upon completion of its review of the EIA Report, the Ministry shall;
- a) approve the EIA Report with the guidance of the Committee, subject to any conditions as may be prescribed, and issue an ECC; or
 - b) inform the Project Proponent of its decision to reject the EIA Report and cite reasons for doing so (grounds for rejection of an EIA Report shall be in accordance with guidance from the Ministry); and, in either case
 - c) publicly and timely disclose its decision by appropriate means.

CHAPTER VI.

Appeal Process

71. Within thirty (30) days of public disclosure that the EIA Report has been approved or rejected by the Ministry, any Project Proponent, person or organization which submitted the EIA Report in accordance with this Procedure, and any other person or organization potentially affected by any Adverse Impacts of the Project, shall have the right to file an appeal to the Committee through the Ministry with respect to the Ministry decision to reject or approve such EIA Report, provided, however, that:
- a) no appeal of a decision by the Ministry to reject an EIA Report shall be allowed, except where the appellant has specifically alleged that such rejection was not duly made in accordance with this Procedure or that such rejection was based upon an unsubstantiated or unjustified decision by the Ministry;
 - b) not more than one (1) appeal on the same case shall be allowed with respect to a decision by the Ministry; and
 - c) no condition prescribed by the Ministry shall be subject to appeal by a Project Proponent.
72. With respect to any appeals allowed that are received by the Ministry within the appeal submission period, the Ministry shall, within fifteen (15) days of receipt of such appeals, forward the appeals to the Committee for consideration.
73. The Committee shall, within thirty (30) working days of its receipt of a forwarded appeal from the Ministry, consider that appeal and make a decision to:
- a) uphold the decision of the Ministry, or

- b) instruct the Ministry to require the Project Proponent to revise and resubmit the EIA Report to the Ministry, or
 - c) instruct the Ministry to alter, revise or cancel its decision on the EIA Report and cite its grounds for such instruction.
74. The decision of the Committee shall be final.
75. The Ministry shall inform the Committee decision to the appellant and the Project Proponent. Upon receipt of the decision from the Committee, the Ministry shall publicly disclose any reversal or modification of its decision concerning an EIA Report.

CHAPTER VII.

Environmental Management Plan

76. For Project types which require EMP according to the Article 55 (a) of the Rules or Article 24 of the Procedure, the Project Proponent may prepare an EMP by itself or may appoint a person or organization who/which is registered according to the Article 18.
77. The Project Proponent shall issue a letter of endorsement in a format prescribed by the Ministry according to the Article 63. Such letter shall be submitted to the Department prepared either in the Myanmar language, or in the English language or both. The Project Proponent shall submit the EMP to the Department in both digital form and complete paper copies, together with the required service fee as prescribed by the Department, and confirming:
- a) the accuracy and completeness of the EMP;
 - b) that the EMP has been prepared in strict compliance with applicable laws including this Procedure; and
 - c) that the Project will at all times comply fully with the commitments, mitigation measures, and plans in the EMP.
78. Upon Receipt of the EMP from the Project Proponent, the Department shall review and submit to the Ministry to enable it to make a final decision on approval of the EMP.
79. If it is determined by the Ministry that the EMP does not satisfy requirements, then the Project Proponent shall be called upon by the Department to undertake necessary amendments and/or to provide supplementary information as directed by the Ministry.
80. Upon completion of its review of the EMP, the Ministry shall;
- a) approve the EMP, subject to any conditions it may prescribe, and issue an ECC; or
 - b) require that the Project carry out an IEE or EIA, citing the reasons for this decision and informing the Project Proponent of its decision; and, in either case
 - c) publicly disclose its decision.
81. The Department shall deliver the final decision of the Ministry within thirty (30) working days of receipt of an EMP. If the Ministry requires an EMP to be amended,

then the due date for delivery of the Ministry's decision shall be extended accordingly.

82. Any additional costs associated with reaching a determination regarding Project types which require EMP shall be borne by the Project Proponent.

CHAPTER VIII.

Environmental Consideration in Project Approval

Project Approval Requirements

83. For Projects that require an IEE or EIA, before any permit is granted or issued by any ministry, or any other competent authority in respect of any application to proceed with implementation of such Projects, an ECC shall first have been duly issued by the Ministry in accordance with this Procedure.
84. All Projects and activities, whether categorized in Annex 1 'Categorization of Economic Activities for Assessment Purposes' as requiring an IEE, an EIA, nor neither: (i) are obliged to obtain all required authorizations, permits, licenses and approvals and to comply with all applicable laws, regulations, procedures, ministerial directives, zoning, planning requirements, and other governmental requirements, and (ii) shall remain subject to any environmental and/or social conditions which the Ministry may impose as a condition to the commencement or continuation of construction or operation of that Project or activity.
85. Any proposed Project or activity which has been determined not to require an EIA or IEE (whether because it is below the indicated IEE threshold or is not listed in the categorization below) shall nonetheless be subject to the imposition of any conditions deemed appropriate by the Ministry as part of the review, approval and permitting procedure of the Government.
86. When the relevant ministry or authority has given approval (prior permission, license, permit or register) to a Project for which an ECC has been issued, it shall notify the Ministry of such approval.

Environmental Compliance Certificate, Conditions and Revisions to Conditions

87. Upon receipt of the written approval from the relevant authority, the Project Proponent shall commence implementation of the Project strictly in accordance with the conditions attached to the ECC and including the EMP, within such time as may be prescribed by the Ministry.
88. The Project Proponent shall commence substantial implementation of the Project within the first two (2) years after the issuance of the ECC, and not later than thirty (30) days after such commencement shall notify the Department in writing of the date of commencement, and identify the activities constituting substantial implementation of the Project.
89. The Project Proponent shall be required to carry out and submit for the Ministry's approval a new assessment (IEE or EIA, as the case may be) if substantial Project commencement has not occurred within two (2) years after obtaining the ECC, unless the Project Proponent has applied in writing providing reasons why it has not

been able to commence substantial implementation of the Project, indicating what further period of time is needed before substantial commencement of the Project can take place, and the Ministry has in its discretion granted an extension.

90. An ECC is granted in respect of a specific, clearly identified Project. The ECC must specify:
 - a) the registered name and registered office address of the Project Proponent to whom the ECC is issued;
 - b) the documentation (IEE Report/EIA Report) that the Project Proponent submitted to the Ministry and on the basis of which the ECC has been issued;
 - c) a map, images, aerial photos and satellite images showing the geographic location(s) of the Project and each of its components;
 - d) the Project type and layout with an overview of activities, installations, operations, production capacity, production methods, and waste generation; and
 - e) Project phases and timing (the commencement and conclusion dates of each).
91. The Ministry may prescribe conditions of an ECC. Such conditions may encompass any or all of:
 - a) General management: (i) procedures and management systems to identify, control, prevent or minimize all Adverse Impacts; (ii) procedures to ensure compliance with all environmental and social commitments; (iii) procedures to implement the measures described in the EMP, Construction Phase EMP, and/or Operational Phase EMP, as the case may be; (iv) procedures to improve the environmental and social performance of the Project; (v) organization with qualified environmental and social personnel; and (vi) documentation, reporting and information disclosure procedures;
 - b) Emissions: (i) Emissions not allowed, (ii) Emission Limit Values in terms of types, substances, loads, concentrations, rates, timing, duration, frequency, seasons, and Project phase, (iii) Emission points, (iv) form and media, (v) recipients, (vi) contribution to Environmental Quality Standards, and (vii) statistical methods for determining compliance;
 - c) Use of energy and natural resources: amounts, type, origin of resource, rates, effectiveness of use, and waste generation;
 - d) Pollution Prevention: Effectiveness of production or construction methods or waste storage and treatment facilities to prevent or, where this is not practicable, to minimize pollution, and to prevent or minimize the risk of pollution;
 - e) Nature conservation and management: (i) protection and rehabilitation of sites, environments or species, (ii) effectiveness of environmental measures to prevent or minimize Adverse Impacts on certain environments or species; and (iii) biodiversity offsets;
 - f) Cultural resources: (i) protection of cultural heritage sites, structures and objects, and (ii) procedures for dealing with archeological finds;

- g) Hazardous or toxic materials including waste: (i) limits to the types, categories, and amounts; and (ii) methods and systems of collection, storage, handling, transport, treatment and disposal;
 - h) Waste management: (i) limits to the types, categories, and amounts of waste (liquid, solid, atmospheric) generated; (ii) methods and systems of collection, storage, handling, transport, treatment and disposal; and (iii) recycling or reuse of wastes;
 - i) Transport and access: (i) access points; (ii) means of transport of materials and people to and from the Project; (iii) transport routes for products, materials or waste; and (iv) access control measures;
 - j) Decommissioning, rehabilitation, clean up and closure: (i) sites, areas/ environments and facilities; (ii) objectives and standards; (iii) site conditions and after use; (iv) timing; and (v) controls and monitoring;
 - k) Control measures: (i) prevention of accidents and responses to emergency conditions; (ii) measures and procedures in case of accidents, incidents, and operational irregularities; (iii) control and maintenance of pollution prevention/ minimization measures; and (iv) safety zones;
 - l) Monitoring: (i) parameters; (ii) methods; (iii) sampling and analyses; (iv) point of monitoring; (v) frequency; (vi) timing; (vii) data management; (viii) maintenance and control of monitoring equipment; and (ix) documentation and reporting;
 - m) Documentation and reporting: (i) parameters and issues that must be documented and reported; (ii) types and methods; (iii) frequency and timing; (iv) quality controls; and (v) recipients;
 - n) Financial guarantee: (i) type of guarantee; (ii) amount; (iii) timing; (iv) application; and (v) type and financial capacity of guarantor;
 - o) Funding of inspection by the Ministry: (i) amounts; (ii) payment procedure; and (iii) timing and frequency; and
 - p) Contributions to the Environmental Management Fund in accordance with Article 30 of the Rules: (i) pollution charges (emissions, waste), and (ii) charges on the use of natural resources and benefits from ecosystem services.
92. The Ministry may, upon joint application of a Project Proponent and a proposed transferee, transfer to the proposed transferee an ECC or any part of an ECC.
93. An ECC issued by the Ministry shall be valid for a period of five (5) years from the date of issuance. Six (6) months prior to expiration of an ECC issued by the Ministry, the Project Proponent may apply to the Ministry for an extension.
94. The Ministry may unilaterally modify conditions in the ECC and/or require the Project Proponent to revise and resubmit the EMP to the Ministry for review and approval, if at any time the Ministry determines that:
- a) the mitigation measures are insufficient or inadequate to mitigate the actual or likely impacts of the Project;
 - b) new information becomes known as to how harmful the Adverse Impacts of the Project are, or are likely to be or become;

- c) the Project has Adverse Impacts which could not be foreseen at the time the originally approved IEE Report / EIA Report and EMP were approved;
 - d) the Adverse Impacts of the Project are greater than those anticipated impacts that formed the basis for the preparation, submission, and approvals of the original IEE Report/EIA Report and EMP and the issuance of the ECC and conditions therein;
 - e) new techniques conforming to the definition of BAT are available which would significantly reduce the Adverse Impacts of the Project;
 - f) the Adverse Impacts of the Project can be reduced through adherence to Good Practice without commercially significant extra cost to the Project; or
 - g) the measures/conditions are unnecessary to mitigate the Adverse Impacts.
95. In case of major changes in size, scope, location, layout, technology, risk associated with foreseeable Adverse Impacts, production methods or pollution prevention/mitigation measures of the Project, or an expansion or second phase development is proposed, the Project Proponent shall notify the Ministry and provide supporting documentation of such changes within the timeframe as may be prescribed.
 96. The Ministry shall, upon consideration of the supplemental documentation, if any, make a decision on modifications to the conditions in the ECC or require that a new EIA, IEE or EMP, as the case may be, shall be prepared and submitted.
 97. For EIA Type Projects with comprehensive construction works, the Ministry may include as a condition in the ECC that the Project Proponent shall prepare and submit to the Department a detailed Construction Phase EMP for review and approval prior to the intended start of construction works of the Project.
 98. For EIA Type Projects, the Ministry may include as a condition in the ECC that the Project Proponent shall prepare and submit to the Department a detailed Operational Phase EMP for review and approval prior to the intended start of operations of the Project.
 99. The Department may require that a Construction Phase EMP or Operational Phase EMP, as the case may be, shall be periodically updated and resubmitted to the Department in accordance with Ministry guidance for its review and approval.
 100. The Project Proponent shall incorporate all relevant environmental commitments and requirements set forth in the EIA Report, Construction Phase EMP and/or Operational Phase EMP as the case may be, and in the ECC, applicable Emission Limit Values and Environmental Quality Standards, into detailed designs, construction contract specifications, and contracts on Project operations related to any part of the Project.
 101. In case the Department finds that changes to the Project, the Project site or Adverse Impacts of the Project warrant revisions to the EMP, Construction Phase EMP, or Operational Phase EMP as the case may be, then the Department may require the Project Proponent to prepare and submit a revised EMP, Construction Phase EMP, or Operational Phase EMP, as the case may be to the Department for review and approval.

Responsibility for all Adverse Impacts

102. The Project Proponent shall bear full legal and financial responsibility for:
 - a) all of the Project Proponent's actions and omissions and those of its contractors, subcontractors, officers, employees, agents, representatives, and consultants employed, hired, or authorized by the Project acting for or on behalf of the Project, in carrying out work on the Project; and
 - b) PAPs until they have achieved socio-economic stability at a level not lower than that in effect prior to the commencement of the Project, and shall support programs for livelihood restoration and resettlement in consultation with the PAPs, related government agencies, and organizations and other concerned persons for all Adverse Impacts.
103. The Project Proponent shall fully implement the EMP, all Project commitments, and conditions, and is liable to ensure that all contractors and subcontractors of the Project comply fully with all applicable Laws, the Rules, this Procedure, the EMP, Project commitments and conditions when providing services to the Project.
104. The Project Proponent shall be responsible for, and shall fully and effectively implement, all requirements set forth in the ECC, applicable Laws, the Rules, this Procedure and standards.
105. The Project Proponent shall timely notify and identify in writing to the Ministry, providing detailed information as to the proposed Project's potential Adverse Impacts.

CHAPTER IX.

Monitoring

106. The Project Proponent shall, during all phases of the Project (pre-construction, construction, operation, decommissioning, closure and post-closure), engage in continuous, proactive and comprehensive self-monitoring of the Project and activities related thereto, all Adverse Impacts, and compliance with applicable laws, the Rules, this Procedure, standards, the ECC, and the EMP.
107. The Project Proponent shall notify and identify in writing to the Ministry any breaches of its obligations or other performance failures or violations of the ECC and the EMP as soon as reasonably possible and in any event, in respect of any breach which would have a serious impact or where the urgent attention of the Ministry is or may be required, within not later than twenty-four (24) hours, and in all other cases within seven (7) days of the Project Proponent becoming aware of such incident.
108. The Project Proponent shall submit monitoring reports to the Ministry not less frequently than every six (6) months, as provided in a schedule in the EMP, or periodically as prescribed by the Ministry.
109. The monitoring reports shall include:
 - a) documentation of compliance with all conditions;
 - b) progress made to date on implementation of the EMP against the submitted implementation schedule;

- c) difficulties encountered in implementing the EMP and recommendations for remedying those difficulties and steps proposed to prevent or avoid similar future difficulties;
 - d) number and type of non-compliance with the EMP and proposed remedial measures and timelines for completion of remediation;
 - e) accidents or incidents relating to the occupational and community health and safety, and the environment; and
 - f) monitoring data of environmental parameters and conditions as committed in the EMP or otherwise required.
110. Within ten (10) days of completing a monitoring report as contemplated in Article 108 and Article 109 in accordance with the EMP schedule, the Project Proponent shall make such report (except as may relate to National Security concerns) publicly available on the Project's website, at public meeting places (e.g. libraries, community halls) and at the Project offices. Any organization or person may request a digital copy of a monitoring report and the Project shall, within ten (10) days of receiving such request, submit a digital copy via email or as may otherwise be agreed upon with the requestor.

Monitoring and Inspection by the Ministry, Relevant Government Departments and Organizations

111. The Ministry has the right, using the Department's officers at national, regional, state, Nay Pyi Taw Union Territory and/or local offices, the services of any consultant, or both, to conduct monitoring and inspections of a Project and activities related thereto in order to control and determine compliance by the Project with all applicable environmental and socio-economical requirements and, where possible, to prevent violations of the Project's obligations. The Ministry may also, for the implementation of monitoring and inspections, enlist the assistance of other relevant government departments and organizations.
112. If, upon inspection, the Ministry identifies any non-compliance with the conditions in the ECC, the Ministry may require the Project Proponent to undertake remedial measures and/or may impose penalties as provided for in this Procedure.
113. For purposes of monitoring and inspection, the Project Proponent:
- a) shall grant to the Ministry and/or its representatives, at any time during normal working hours, access to the Project's offices and to the Project site and any other location at which the Project activities or activities related to the Project are performed; and
 - b) from time to time as and when the Ministry may reasonably require, shall grant the Ministry access to the Project's offices and to the Project site and any other location at which the Project activities or activities related to the Project are performed.
114. In carrying out any inspection, the Ministry may take photographs and make other audio and video recordings of any type, take soil, sediment, water, and air samples, and examine computers, copy documents including digital files, interview persons, and carry out any other investigation which the Ministry believes to be necessary or

appropriate. The Ministry, as it deems necessary, may carry out such inspection in coordination with any other ministries.

115. In the event of an emergency, or where, in the opinion of the Ministry, there is or may exist a violation or risk of violation of the compliance by the Project with all applicable environmental and social requirements, the Project shall grant full and immediate access to the Ministry at any time as may be required by the Ministry.
116. The Ministry's inspections may include without limitation sites, facilities, vehicles, computers, archives, documents and all other forms and types of media and information storage, and persons.
117. The Project Proponent shall further ensure that the Ministry's rights of access hereunder shall extend to access by the Ministry to the Project's contractors and subcontractors.
118. Where, in the opinion of the Ministry, the Project is not in compliance with its obligations, the Ministry shall promptly inform the Project.
119. The Ministry may recommend and warn the Project to strictly implement its obligations. The Ministry reserves the right to post any warning on the Ministry and/or Department websites or to require the Project to post and retain such warning on the Project's website, or both, or to effect disclosure to the public in other appropriate ways.
120. The Ministry shall indicate the manner in which environmental and social obligations are not being complied with by the Project Proponent, and shall give the Project a specified time period (determined by the Ministry to be reasonable under the circumstances) within which to bring the Project into compliance.
121. Where, in the opinion of the Ministry, the Project Proponent is not in compliance with, or is likely not to comply with, its environmental and social obligations, the Ministry may take such enforcement actions as the Ministry thinks appropriate as are set out in any applicable law, including without limitation the right to suspend the Project operation, and the right of the Ministry to employ any qualified third party to correct such non-compliance at the Project Proponent's sole expense.
122. All costs of the Ministry to conduct inspection and monitoring of the Project shall be borne by the Project Proponent. Such costs shall not exceed that which is necessary to ensure the Project's compliance with the Project commitments as set out in the EMP and in the ECC.

CHAPTER X.

Strategic Environmental Assessment

123.
 - a) To ensure the achievement of a generally high level of environmental and social protection with respect to Projects and other economic activities in and throughout the Republic of the Union of Myanmar and its political and geographic subdivisions, and to facilitate the prompt and effective integration of relevant environmental and social considerations into public policy and planning, the Ministry may require that policies, strategies, development plans, frameworks and programs that are prepared or contemplated by Union

Ministries, the governments and authorities of Regions, States,, Self-Administered Zones, Self-Administered Divisions, the Nay Pyi Taw Union Territory, Cities and Townships, and other individuals or organizations shall be screened for potential environmental and social impacts in accordance with strategic environmental assessment guidelines issued by the Ministry.

- b) Where such Screening indicates that any such policy, strategy, development plan, framework or program may have a significant environmental or social impact, the Ministry may require the authority responsible for such policy, strategy, development plan, framework or program to undertake a properly scoped study to identify and assess the potential environmental and social impacts, and to prepare and incorporate into such policy, strategy, development plan, framework or program an environmental and social management and monitoring framework comprehensively addressing such impacts.
124. The Ministry may require that Projects and other economic activities that derive from such policy, strategy, development plan, framework or program that are prepared or contemplated by Union Ministries, the governments and authorities of Regions, States, Self-Administered Zones, Self-Administered Divisions, the Nay Pyi Taw Union Territory, Cities and Townships, and other individuals or organizations and which have been required to undertake a study to identify and assess the potential environmental and social impacts (as stipulated above) shall be developed and implemented (sited, designed, constructed and operated) in accordance with the environmental and social management and monitoring framework of such policy, strategy, development plan, framework or program.

CHAPTER XI.

Administrative Punishment

125. The Ministry shall have the right to impose penalties on a Project for any breach by the Project, the Project Proponent, or any contractor or subcontractor of the Project or any other Person acting on behalf of the Project, of commitments as set forth in the Prior Permission. In addition it shall take action in imposing other administrative punishment.
126. The imposition of such penalties and administrative punishment on the Project shall be subject to:
- a) with respect to the first occurrence of any such breach, violation or performance failure, receipt by the Project Proponent of prior written notice and expiration of a reasonable cure period not exceeding sixty (60) days.
 - b) the Project Proponent shall not be entitled under (a) to receive any warning or receive the benefit of any cure period with respect to the recurrence of any such breach, violation or performance failure that occurs within five (5) years from the date of the initial breach, violation or performance failure prior to the imposition of applicable penalties by the Ministry.
127. Penalties are imposed and required to be paid in addition to any costs of remediation, clean up, and compensation that may be incurred by the Ministry. Penalties imposed pursuant to this Procedure are in addition to any penalties that

may be imposed under any other applicable law or regulation, the Rules or this Procedure.

128. The payment of penalties by the Project Proponent shall not relieve the Project of liability, if any, for claims that may be asserted against the Project by third parties with respect to damage incurred and/or injury suffered arising out of the Project's performance or any breaches or performance defects by the Project.
129. Penalties payable to the Ministry and administrative punishments under this Procedure are as set forth in Annex 3 'Prescribed Penalties Under Procedure' hereto.
130. The Department shall prepare and submit to the Ministry the list of administrative punishments applicable to Projects.
131. With respect to Projects which continue to be non-compliant with this Procedure after the imposition of administrative punishment, the Ministry shall both contemplate criminal punishment provided for under Article 32 of the Law, and inform the relevant government departments and organizations having authority to issue licenses, permits or registrations, to take necessary action.

(Win Tun)

Union Minister

ANNEX 1

Categorization of Economic Activities for Assessment Purposes

- a. This Annex provides guidance as to whether an IEE or EIA is required for any proposed project or activity. If, as a result of that determination, an IEE or an EIA is determined to be required, then the proponent of the project or activity will be obliged to prepare, obtain approval for, and implement an appropriate EMP in respect of the proposed project or activity. Any appeal from such determination must be made in accordance with the EIA Procedure.
- b. If a Project Proponent of an existing project or activity intends to expand that project or activity, then the Department shall consider and use the type and size thresholds specified in the categorization below as the basis for determining whether such expanded project or activity will be required to conduct any additional assessment, either in the form of an IEE, an EIA or an EMP.
- c. If a production capacity included in the categorization below has not been explicitly expressed as a total production capacity (e.g. installed capacity for energy production), then the applicable production capacity threshold shall be the total production output under normal operations.
- d. The Ministry reserves the right to interpret, clarify and amend this Annex from time to time as and when it deems necessary in accordance with the Article 30 of the Procedure.

No.	Type of Economic Activity	Criteria for IEE Type Economic Activities	Criteria for EIA Type Economic Activities
SPECIAL INVESTMENT PROJECTS			
1.	Projects in which investment is decided by the Parliament or the government cabinet or the President	-	All sizes
ENERGY SECTOR DEVELOPMENT			
2.	Hydro Power Plants	Installed capacity \geq 1 MW but $<$ 15 MW and Reservoir volume (full supply level) $<$ 20,000,000 m ³ and Reservoir area (full supply level) $<$ 400 ha	Installed capacity \geq 15 MW or Reservoir volume (full supply level) \geq 20,000,000 m ³ or Reservoir area (full supply level) \geq 400 ha
3.	Nuclear Power Plants	-	All sizes
4.	Natural Gas or Bio Gas Power Plants	Installed capacity \geq 5 MW but $<$ 50 MW	Installed capacity \geq 50 MW
5.	Coal-fired Power Plants	Installed capacity \geq 1 MW but $<$ 10 MW	Installed capacity \geq 10 MW
6.	Power Plants from Waste Products	Installed capacity \geq 50 MW	All activities where the Ministry requires that the Project shall undergo EIA
7.	Geothermal Facilities	Installed capacity \geq 5 MW but $<$ 50 MW	Installed capacity \geq 50 MW
8.	Combined Cycle Power Plants (gas & thermal)	Installed capacity \geq 5 MW but $<$ 50 MW	Installed capacity \geq 50 MW
9.	Thermal Power Plants (other than the types in items 4, 5, 6, 7 and 8)	Installed capacity \geq 5 MW but $<$ 50 MW	Installed capacity \geq 50 MW
10.	Wind Power Plants	Installed capacity \geq 5 MW but $<$ 50 MW	Installed capacity \geq 50 MW
11.	Solar Power Plants	Installed capacity \geq 50 MW	All activities where the Ministry requires that the Project shall undergo EIA
12.	Onshore Oil and Gas Seismic Surveys	All sizes	
13.	Onshore Oil and Gas Exploration Drillings	-	All sizes
14.	Onshore Oil and Gas Production drilling and production activities; transportation activities including pipelines; pump stations, compressor stations and storage facilities; ancillary and support operations;	-	All sizes

	and decommissioning		
15.	Offshore Oil and Gas Seismic Surveys	All sizes	-
16.	Offshore Oil and Gas Exploration Drillings	-	All sizes
17.	Offshore Oil and Gas Production drilling and production activities; offshore pipeline operations, offshore transportation, compressor stations and storage facilities; ancillary and support operations; and decommissioning	-	All sizes
18.	Petroleum Refineries or Natural Gas Refineries (including manufacturing of liquefied petroleum gas, motor gasoline, kerosene, diesel oil, heating oil, fuel oil, bitumen, asphalt, sulphur, and intermediate products e.g. propane/propylene mixtures, virgin naphtha, middle distillate and vacuum distillate for the petrochemical industry)	-	All sizes
19.	Natural Gas Processing Plants; Production of liquid products from natural gas (this may include methanol and petroleum liquid products such as naphtha, gasoline, kerosene, diesel fuel, waxes, and lubes)	-	All sizes
20.	Natural Gas Liquefaction Plants	-	All sizes
21.	Oil or Natural Gas Terminals	-	All sizes
22.	Petroleum Depots or Liquid Gas Depots	Storage capacity Petroleum < 10,000 t; Liquid gas < 2,500 t	Storage capacity Petroleum ≥ 10,000 t; Liquid gas ≥ 2,500 t
23.	Oil or Gas Transmission or Distribution Systems	< 10 km	≥ 10 km
24.	Filling Stations (including liquefied petroleum gas and compressed natural gas)	≥ 10 m ³ (10,000 l) fuel storage capacity	All activities where the Ministry requires that the Project shall undergo EIA
25.	Petroleum-based Organic Chemicals Manufacturing	-	All sizes
26.	Electrical Power Transmission Lines ≥ 115 kV but < 230 kV	≥ 50 km	All activities where the Ministry requires that the Project shall undergo EIA
27.	Electrical Power Transmission Lines ≥ 230 kV	All sizes	All activities where the Ministry requires that the Project shall undergo EIA
28.	High Voltage (230 kV and 500 kV) Transformer Substations	≥ 4 ha	All activities where the Ministry requires that the Project shall undergo EIA

AGRICULTURE, LIVESTOCK AND FORESTRY DEVELOPMENT			
29.	Plantation Industrial/Crop Production (e.g. rubber, palm oil, cocoa, coffee, tea, bananas, sugar cane)	≥ 200 ha but < 500 ha	≥ 500 ha
30.	Annual Crop Production (e.g. cereals, pulses, roots, tubers, oil-bearing crops, fibre crops, vegetables, and fodder crops)	≥ 500 ha but < 3,000 ha	≥ 3,000 ha
31.	Livestock Farms (e.g. cows, buffaloes, horses, goats, sheep and others)	≥ 500 livestock units but < 3,000 livestock units	≥ 3,000 livestock units
32.	Farms for Poultry and Other Commercially Raised Fowl	Fowl (poultry, ducks, turkeys) ≥ 5,000 but < 20,000 Ostriches ≥ 50 but < 200 Quail ≥ 25,000 but < 100,000	Fowl ≥ 20,000 Ostriches ≥ 200 Quail ≥ 100,000
33.	Pig Farms	≥ 2,000 pigs but < 5,000 pigs	≥ 5,000 pigs
34.	Inland Fish Raising and Aquaculture (in rivers, lakes, ponds; including shrimp raising)	Total water surface ≥ 1 ha but < 25 ha	Total water surface ≥ 25 ha
35.	Marine and Coastal Fish Raising and Aquaculture	Total water surface ≥ 1 ha but < 100 ha	Total water surface ≥ 100 ha
36.	Oyster Raising and Pearl Production	≥ 50 ha but < 200 ha	≥ 200 ha
37.	Raising and Caring for Wild Animals	All sizes	All activities where the Ministry requires that the Project shall undergo EIA
38.	Reptile Farms	Alligators, monitor lizards or pythons < 1,000 reptiles other reptiles < 5,000 reptiles	≥ 1,000 alligators, monitor lizards or pythons ≥ 5,000 snakes or other reptiles
39.	Clear-cut Logging	< 500 ha	≥ 500 ha
40.	Concession Forest	< 10,000 ha	≥ 10,000 ha
41.	Irrigation Systems	≥ 100 ha but < 5,000 ha	≥ 5,000 ha
Manufacturing			
<i>Food and Beverage Manufacturing</i>			
42.	Meat Processing Plants (slaughter of cattle, pigs, sheep and other livestock)	≥ 15 t/d but < 50 t/d carcass production	≥ 50 t/d carcass production
43.	Poultry Processing Plants (slaughter of poultry and other commercially raised fowl)	≥ 15 t/d but < 50 t/d carcass production	≥ 50 t/d carcass production
44.	Fish Processing Plants	≥ 15 t/d but < 75 t/d	≥ 75 t/d

	(fish, crustaceans, gastropods, cephalopods, and bivalves; includes by-products such as fish oil and fish meals)		
45.	Food and Beverage Processing Facilities (processing of beef, pork, mutton and poultry meats, vegetable, and fruit raw materials into value-added food and non-fermented beverage products for human consumption)	≥ 10 t/d but < 20 t/d	≥ 20 t/d
46.	Dairy Processing Plants (reception, storage, and industrial processing of raw milk and the handling and storage of processed milk and dairy products)	≥ 200 t/d raw milk on annual average basis	All activities where the Ministry requires that the Project shall undergo EIA
47.	Manufacture of Animal Feeds	≥ 100 t/d but < 300 t/d product and < 600 t/d if production is operating a maximum of 90 d/a	≥ 300 t/d product or ≥ 600 t/d if production is operating a maximum of 90 d/a
48.	Vegetable Oil Production and Processing Facilities	≥ 100 t/d but < 300 t/d product and < 600 t/d if production is operating a maximum of 90 d/a	≥ 300 t/d product or ≥ 600 t/d if production is operating a maximum of 90 d/a
49.	Manufacture of Starches and Starch Products	≥ 100 t/d but < 300 t/d product and < 600 t/d if production is operating a maximum of 90 d/a	≥ 300 t/d product or ≥ 600 t/d if production is operating a maximum of 90 d/a
50.	Manufacture of Grain Mill Products (grain milling, rice milling, production of rice flour, vegetable milling, coffee and cocoa milling, manufacture of flour)	≥ 100 t/d but < 300 t/d product and < 600 t/d if production is operating a maximum of 90 d/a	≥ 300 t/d product or ≥ 600 t/d if production is operating a maximum of 90 d/a
51.	Monosodium Glutamate (seasoning powder) Factories	≥ 50 t/d but < 100 t/d	≥ 100 t/d
52.	Sugar Manufacturing Plants	≥ 50 t/d but < 300 t/d and < 600 t/d if production is operating a maximum of 90 d/a	≥ 300 t/d refined sugar or ≥ 600 t/d if production is operating a maximum of 90 d/a
53.	Alcohol, Wine and Beer Production Factories	≥ 50,000 l/d but < 300,000 l/d product and	≥ 300,000 l/d product or

		< 600,000 l/d if production is operating a maximum of 90 d/a	≥ 600,000 l/d if production is operating a maximum of 90 d/a
54.	Non-Alcohol Factories (soda, soft drink, mineral water production)	≥ 20,000 l/d	All activities where the Ministry requires that the Project shall undergo EIA
55.	Ice Factories	≥ 500 t/d but < 2,000 t/d	≥ 2,000 t/d
56.	Drinking Water Factories (for bottled refined water)	≥ 100,000 l/d	All activities where the Ministry requires that the Project shall undergo EIA
57.	Tobacco Processing Plants	≥ 1 t/d but < 15 t/d product	≥ 15 t/d product
Garments, Textiles and Leather Products			
58.	Textile Manufacturing Facilities (production of yarn, fabric, garments and finished goods based on natural fibres, synthetic fibres and/or regenerated fibres)	All sizes	All activities where the Ministry requires that the Project shall undergo EIA
59.	Pre-treatment (washing, bleaching, mercerisation) or Dyeing of Textiles or Fibres	≥ 1 t/d but < 10 t/d	≥ 10 t/d
60.	Leather Products Manufacturing (includes synthetic leather, handbags, luggage, saddle, footwear)	≥ 1,000 t/a	All activities where the Ministry requires that the Project shall undergo EIA
61.	Tanning and Leather Finishing	< 12 t/d finished products	≥ 12 t/d finished products
Wood Manufacturing			
62.	Sawmilling and Manufactured Wood Products	Sawmills: input ≥ 3,000 m ³ /a but < 50,000 m ³ /a Wood products: input ≥ 1,000 m ³ /a but < 15,000 m ³ /a	Sawmills: input ≥ 50,000 m ³ /a Wood products: input ≥ 15,000 m ³ /a
63.	Board and Particle-based Products Manufacturing (board and particle-based products, plywood and glued and laminated products, board from other raw materials such as sugar cane bagasse, straw, and linen)	< 600 m ³ /d or < 420 t/d	≥ 600 m ³ /d or ≥ 420 t/d
64.	Pulp and/or Paper Mills	≥ 20 t/d but < 50 t/d	≥ 50 t/d
65.	Printing or Other Surface Treatment Facilities (using organic solvents, in particular for dressing, printing, coating, degreasing, waterproofing, sizing, painting, cleaning or impregnating)	≥ 6 kg/h but < 150 kg/h consumption of organic solvents	≥ 150 kg/h or ≥ 200 t/a consumption of organic solvents

Chemicals Manufacturing			
66.	Large Volume Inorganic Compounds Manufacturing and Coal Tar Distillation (includes ammonia, acids [nitric, hydrochloric, sulphuric, hydrofluoric, phosphoric acid], chlor-alkali [e.g. chlorine, caustic soda, soda ash], carbon black, and coal tar distillation [naphthalene, phenanthrene, anthracene])	-	All sizes
67.	Petroleum-based Polymers Manufacturing Plants	-	All sizes
68.	Coal Processing Plants (processing of coal into gaseous or liquid chemicals including fuels)		All sizes
69.	Chemical Fertilizer Manufacturing Plants	-	All sizes
70.	Pesticide Manufacturing, Formulation, and Packaging Plants	-	All sizes
71.	Oleochemicals Manufacturing Plants (production of fatty acids, glycerine, and biodiesel using fats and oils from vegetable or animal sources)		All sizes
72.	Pharmaceuticals and Biotechnology Manufacturing Plants	< 50 t/a	≥ 50 t/a
73.	Other Basic Organic Chemicals Manufacturing Plants	-	All sizes
74.	Other Basic Inorganic Chemicals Manufacturing Plants	-	All sizes
75.	Other Chemical Products Manufacturing Plants (e.g. paints, inks, varnishes, soap, detergents, perfumes, pyrotechnic products, photographic chemicals)	≥ 5 t/d but < 10 t/d	≥ 10 t/d
76.	Explosives Manufacturing Plants	-	All sizes
77.	Manufacturing of Extinguishers and Other Firefighting Products	All sizes	All activities where the Ministry requires that the Project shall undergo EIA
78.	Manufacturing of CO ₂ Gas and Filling and Liquefying Industrial Gas	≥ 1,000 t/a but < 3,000 t/a	≥ 3,000 t/a
Manufacture of Glass and Ceramics			
79.	Glass, Glass Fibre or Mineral Fibre Manufacturing Plants	All sizes	All activities where the Ministry requires that the Project shall undergo EIA

80.	Ceramic Tile and Sanitary Ware Manufacturing Plants	≥ 1,000 t/a fine ceramics ≥ 10,000 t/a ceramic tiles	All activities where the Ministry requires that the Project shall undergo EIA
Manufacture of Construction Materials			
81.	Cement and Lime Manufacturing Plants	Cement ≥ 10 t/h but < 30 t/h Lime ≥ 20 t/d but < 50 t/d	Cement ≥ 30 t/h Lime ≥ 50 t/d
82.	Clinker Plants	All sizes	All activities where the Ministry requires that the Project shall undergo EIA
83.	Other Construction Supplies and Materials Production	≥ 30,000 t/a but < 50,000 t/a	≥ 50,000 t/a
84.	Asphalt Production Plants	< 100 t/d	≥ 100 t/d
Metal, Machinery and Electronics			
85.	Base Metal Smelting and Refining Plants (base metal smelting and refining of lead, zinc, copper, nickel, and aluminium)	Non-ferrous metal < 20 t/d melting capacity, except for lead and cadmium < 4 t/d melting capacity	Non-ferrous metal ≥ 20 t/d melting capacity, except for lead and cadmium ≥ 4 t/d melting capacity
86.	Manufacture of Pig Iron, Raw and Low Alloy Steel from Iron Ore or Scrap Metal	< 2.5 t/h	≥ 2.5 t/h
87.	Foundries (casting ferrous [iron and steel] and nonferrous [primarily aluminium, copper, zinc, lead, tin, nickel, magnesium, and titanium] metals)	Ferrous metal < 20 t/d production capacity Non-ferrous metal < 20 t/d production capacity except for lead and cadmium < 4 t/d production capacity	Ferrous metal ≥ 20 t/d production capacity Non-ferrous metal ≥ 20 t/d production capacity except for lead and cadmium ≥ 4 t/d production capacity
88.	Non-ferrous Metal Melting, Smithy and Filigree	Production capacity ≥ 5 t/d but < 20 t/d	Production capacity ≥ 20 t/d
89.	Shipyards and Ship Building Enterprises	< 1 ha and < 20,000 t lifting capacity	≥ 1 ha or ≥ 20,000 t lifting capacity
90.	Locomotives and Other Railway Rolling Material Manufacturing, Repairing and Assembling	-	≥ 100 vehicles/a
91.	Metal, Plastic, Fibre and Rubber Products Manufacturing Plants (material processing operations common to multiple industries engaged in the manufacture of metal, plastic, fibre, and rubber products)	≥ 5,000 m ² production area, or ≥ 6 kg/h consumption of organic solvents	All activities where the Ministry requires that the Project shall undergo EIA
92.	Rubber and Latex Processing Plants	≥ 2,000 t/a	All activities where the Ministry requires that the Project shall undergo EIA
93.	Vehicle Tire Manufacturing Plants	≥ 5,000 m ² production area, or	All activities where the Ministry requires that

		≥ 6 kg/h consumption of organic solvents	the Project shall undergo EIA
94.	Semiconductors and Other Electronics Manufacturing Plants (manufacturing of semiconductors, printed circuit boards, printed wiring assemblies, screens, passive components, and magnetic devices)	≥ 5,000 m ² production area, or ≥ 6 kg/h consumption of organic solvents	All activities where the Ministry requires that the Project shall undergo EIA
95.	Electronic and Electric Equipment Manufacturing Plants (computers, communication equipment, consumer electronics (cooking, washing, food, warm and cooling domestic and public electronic, laboratory equipment, electric motors, electric lightning etc.)	≥ 5,000 m ² production area, or ≥ 6 kg/h consumption of organic solvents	All activities where the Ministry requires that the Project shall undergo EIA
96.	Batteries and Accumulators Manufacturing Plants	< 3,000 t/a	≥ 3,000 t/a
97.	Machinery, Vehicles and Equipment Manufacturing Plants	≥ 5,000 m ² production area, or ≥ 6 kg/h consumption of organic solvents	All activities where the Ministry requires that the Project shall undergo EIA
98.	Motor Vehicle and Motor Bike Assembly Plants	≥ 5,000 m ² production area, or ≥ 6 kg/h consumption of organic solvents	All activities where the Ministry requires that the Project shall undergo EIA
99.	Motor Vehicle Accessories, Related Equipment and Engine Manufacturing Factories	≥ 5,000 m ² production area, or ≥ 6 kg/h consumption of organic solvents	All activities where the Ministry requires that the Project shall undergo EIA
100.	Motor Vehicle Maintenance Workshops	Utilization area ≥ 5,000 m ²	All activities where the Ministry requires that the Project shall undergo EIA
101.	Car Breaking	< 10 vehicles/d, < 50 motorbikes/d	≥ 10 vehicles/d ≥ 50 motorbikes/d
102.	Weapons and Ammunition Manufacturing Plants	-	All sizes
Waste Management			
103.	Non-Hazardous Waste Disposal Facilities	Landfills < 10 t/d and total capacity < 25,000 t Others < 50 t/d	Landfills ≥ 10 t/d or total capacity ≥ 25,000 t Others ≥ 50 t/d
104.	Non-Hazardous Waste Incinerators	< 3 t/h	≥ 3 t/h
105.	Non-Hazardous Waste Recycling, Recovery or Reuse Facilities	< 50 t/d	≥ 50 t/d
106.	Hazardous Waste Disposal Facilities	-	All sizes

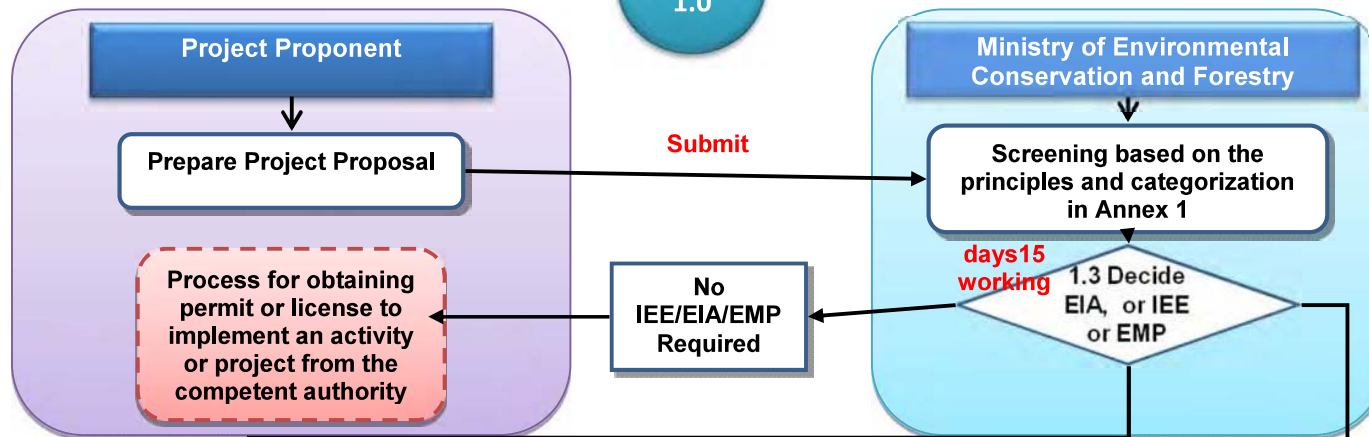
107.	Hazardous Waste Recycling, Recovery or Reuse Facilities	< 10 t/d	≥ 10 t/d
108.	Wastewater Treatment Plants (centralized systems)	-	All sizes
109.	Wastewater and Storm Water Collection Systems	Length ≥ 1 km but < 10 km	≥ 10 km
Water Supply			
110.	Groundwater Development for Industrial, Agricultural or Urban Water Supply	< 4,500 m ³ /d	≥ 4,500 m ³ /d
Infrastructure and Service Development			
111.	Dams and Reservoirs	Dam height < 15 m and Reservoir area < 400 ha	Dam height ≥ 15 m or Reservoir area ≥ 400 ha
112.	Lake, River and Channel Land Filling which Impacts on the Public	Area < 50 ha	Area ≥ 50 ha
113.	Other Large Civil Works Construction (embankments, seawalls, offshore breakwater)	Length < 2 km and Area < 25 ha	Length ≥ 2 km or Area ≥ 25 ha
114.	Dredging	Total < 500,000 t	Total ≥ 500,000 t
115.	River Channel Conservation (surface water & water volume control)		All sizes
116.	Shipping (operation and maintenance of ships used for the transport of bulk cargo, and goods, and ship breaking)	All sizes	All activities where the Ministry requires that the Project shall undergo EIA
117.	Ports, Harbours, and Terminals (ports, harbours, and terminals for cargo and passengers transfer)	Area < 25 ha	Area ≥ 25 ha
118.	Industrial Zone Construction and Development	-	All sizes
119.	Hospitals	All sizes	All activities where the Ministry requires that the Project shall undergo EIA
120.	Cemeteries and Crematoria (for burial, incineration and other forms)	All sizes	
121.	Tourism and Hospitality Development	≥ 80 rooms but < 200 rooms or	≥ 200 rooms or

		total utilization area $\geq 200,000 \text{ m}^2$ but $< 500,000 \text{ m}^2$	total utilization area is $\geq 500,000 \text{ m}^2$
122.	Golf courses	9 holes	18 holes
Transportation			
123.	Railways and Tramways (construction and maintenance of rail infrastructure and operation of rolling stock)	Length $< 5 \text{ km}$	Length $\geq 5 \text{ km}$
124.	Cable Cars	Length $< 0.5 \text{ km}$	Length $\geq 0.5 \text{ km}$
125.	Airports and Runway Construction	Runway length $< 2,100 \text{ m}$	Runway length $\geq 2,100 \text{ m}$
126.	Bridges, River Bridges and Viaducts (new construction)	Length $\geq 200 \text{ m}$ but $< 2 \text{ km}$	Length $\geq 2 \text{ km}$
127.	Bridges, River Bridges and Viaducts (upgrading)	Length $\geq 300 \text{ m}$	All activities where the Ministry requires that the Project shall undergo EIA
128.	Tunnels	Length $< 1 \text{ km}$	Length $\geq 1 \text{ km}$
129.	Expressways and Highways (ASEAN Highway Standard; new construction or widening)	Length $\geq 2 \text{ km}$ but $< 50 \text{ km}$	Length $\geq 50 \text{ km}$
130.	Other Roads (state, region, urban; new construction or widening)	Length $\geq 50 \text{ km}$ but $< 100 \text{ km}$	Length $\geq 100 \text{ km}$
131.	Road Improvement (upgrading from seasonal to all weather surface, widening of shoulders)	Length $\geq 50 \text{ km}$	All activities where the Ministry requires that the Project shall undergo EIA
Mining			
132.	Extraction of Rock, Gravel or Sand from a River or Marine Waters	$\geq 1,000 \text{ m}^3/\text{a}$ but $< 50,000 \text{ m}^3/\text{a}$	$\geq 50,000 \text{ m}^3/\text{a}$
133.	Construction, Building and Ceramic Minerals Extraction (aggregates, limestone, slates, clay, gypsum, feldspar, silica sands, granite, kaolin, bentonite, marble, and quartzite)	$< 200 \text{ acre}$ and $< 100,000 \text{ t/a}$	$\geq 200 \text{ acre}$ or $\geq 100,000 \text{ t/a}$
134.	Extraction and Refining of Industrial Minerals (barite, fluorite, phosphate, potash, salt, soda ash, asbestos)	$< 200 \text{ acre}$ and $< 100,000 \text{ t/a ore}$	$\geq 200 \text{ acre}$ or $\geq 100,000 \text{ t/a ore}$
135.	Extraction of Ferrous, Non-Ferrous Metal and Precious Metal Ore Except Gold (iron, manganese, silver, copper, tin, antimony, lead, nickel, zinc, chromium, bauxite), and Precious Stone	$< 50 \text{ acre}$ and $< 50,000 \text{ t/a}$	$\geq 200 \text{ acre}$ or $\geq 50,000 \text{ t/a}$

136.	Refining of Metal Mineral Ore (without using hazardous chemicals)	< 50,000 t/a	≥ 50,000 t/a
137.	Refining of Metal Mineral Ore (using hazardous chemicals)	< 25,000 t/a	≥ 25,000 t/a
138.	Extraction and Refining of Gold Ore (without using hazardous chemicals)	< 20 acre	≥ 20 acre
139.	Extraction and Refining of Gold Ore (using hazardous chemicals)	< 20 acre and < 25,000 t/a	≥ 20 acre or ≥ 25,000 t/a
140.	Coal Mining (underground and surface)	< 100,000 t/a coal	≥ 100,000 t/a coal
141.	Mining, including Dredging of Heavy Mineral Sands (tungsten, ilmenite, rutile, zircon, titanium, monazite)	≥ 1,000 m ³ /a but < 50,000 m ³ /a	≥ 50,000 m ³ /a

Project Proposal Screening

Chart 1.0



IEE/EMP Type Activity or Project

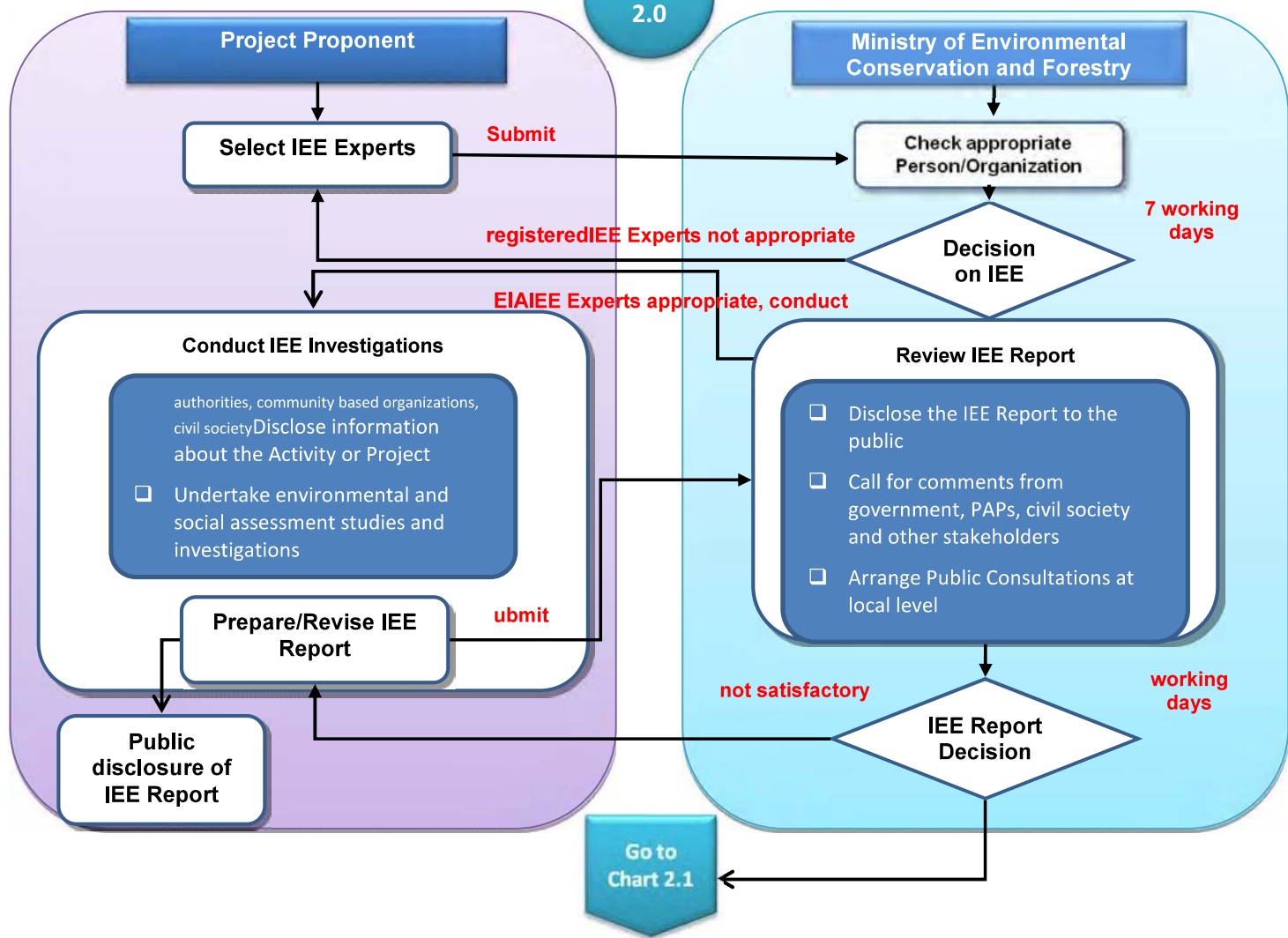
[]

- Chart 2.0 EE Investigations and Review
- Chart 2.1 IEE Review and Approval Process
- Chart 2.2 EMP Preparation, Review and Approval Process

- Chart 3.0 Scoping (EIA)
- Chart 3.1 EIA Investigations and Review
- Chart 3.2 EIA Review and Approval
- Chart 4.0 Appeal Process

IEE Investigations and Review

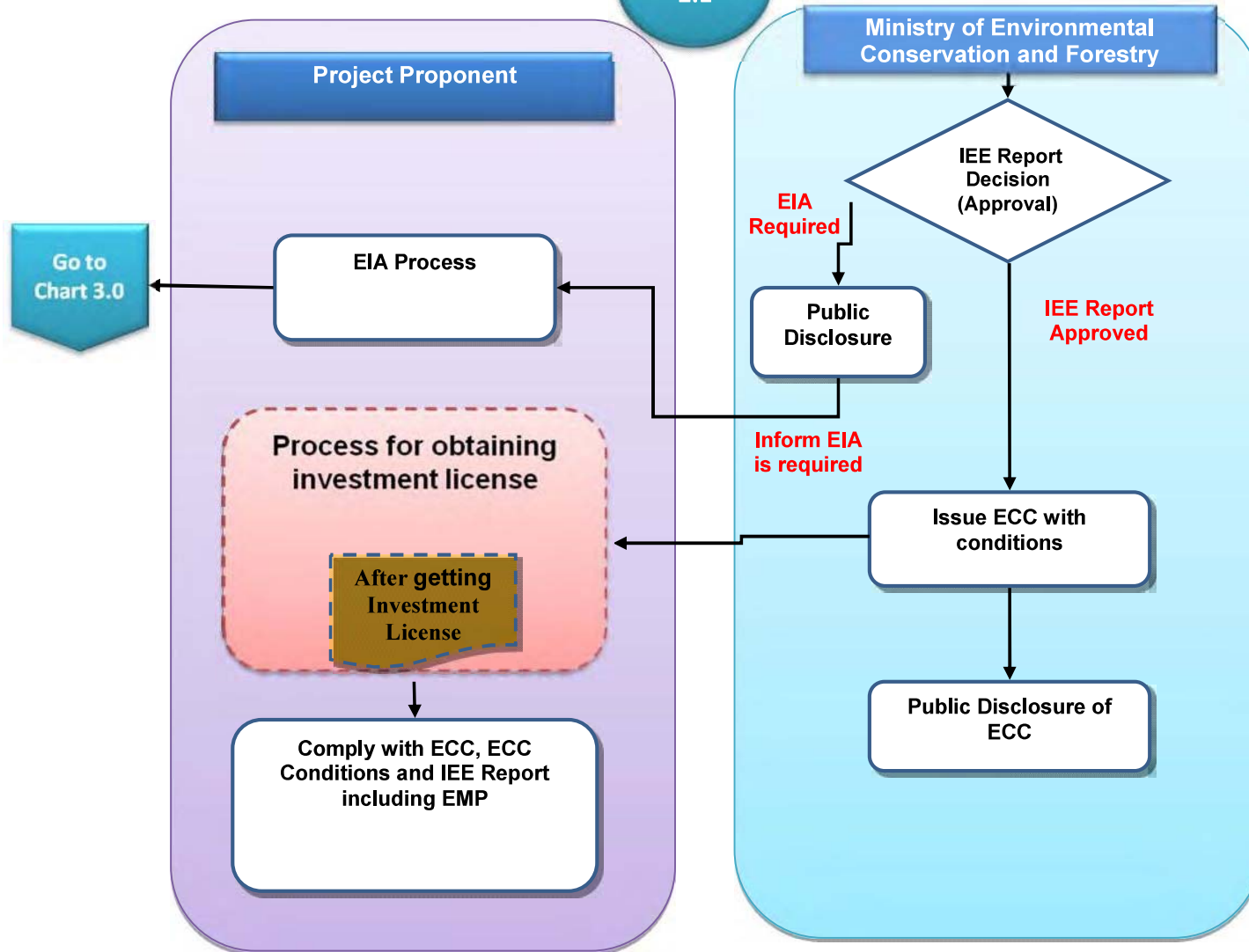
Chart 2.0



A8-46

IEE Review and Approval

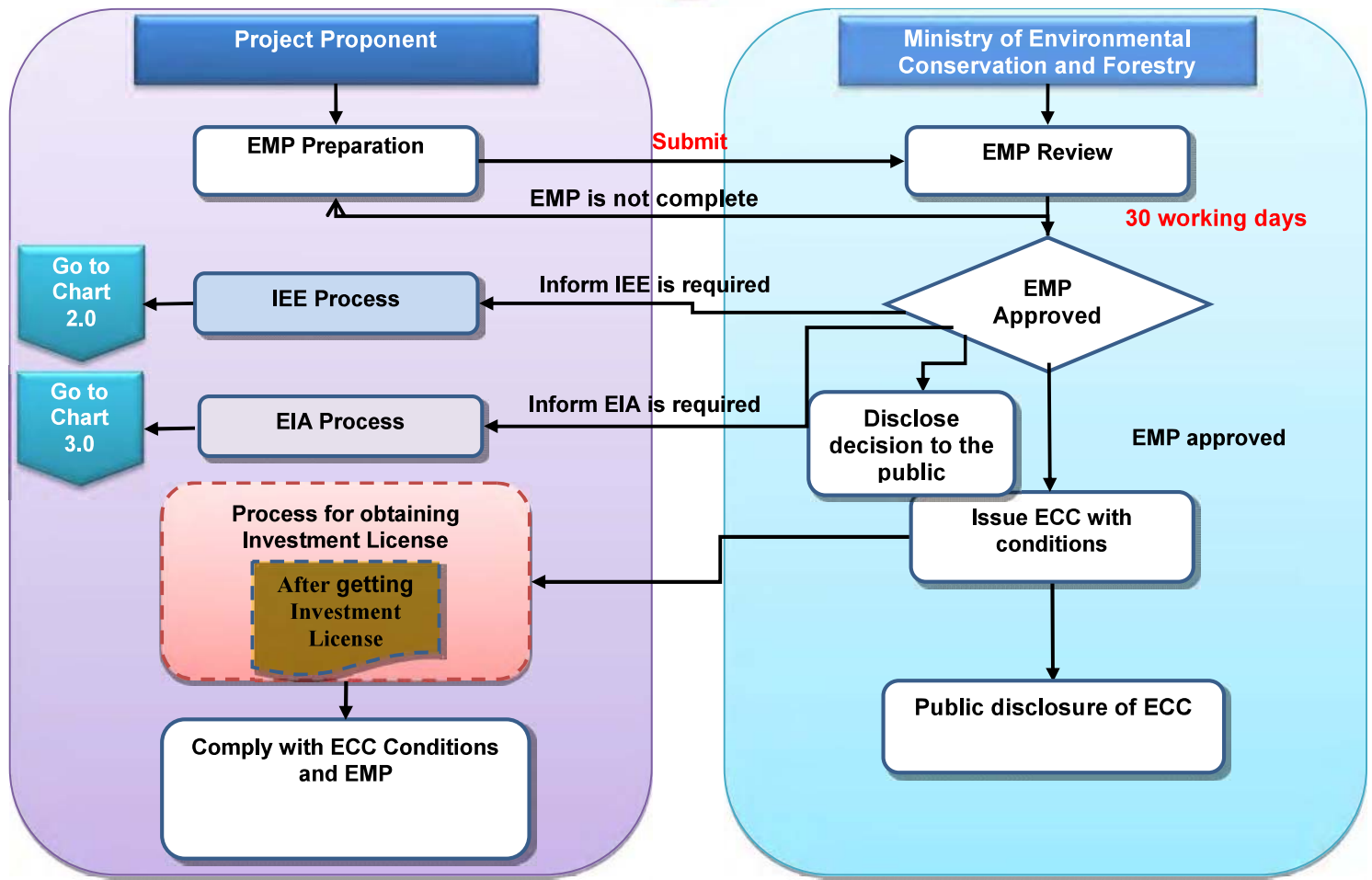
Chart 2.1



A8-47

EMP Review and Approval

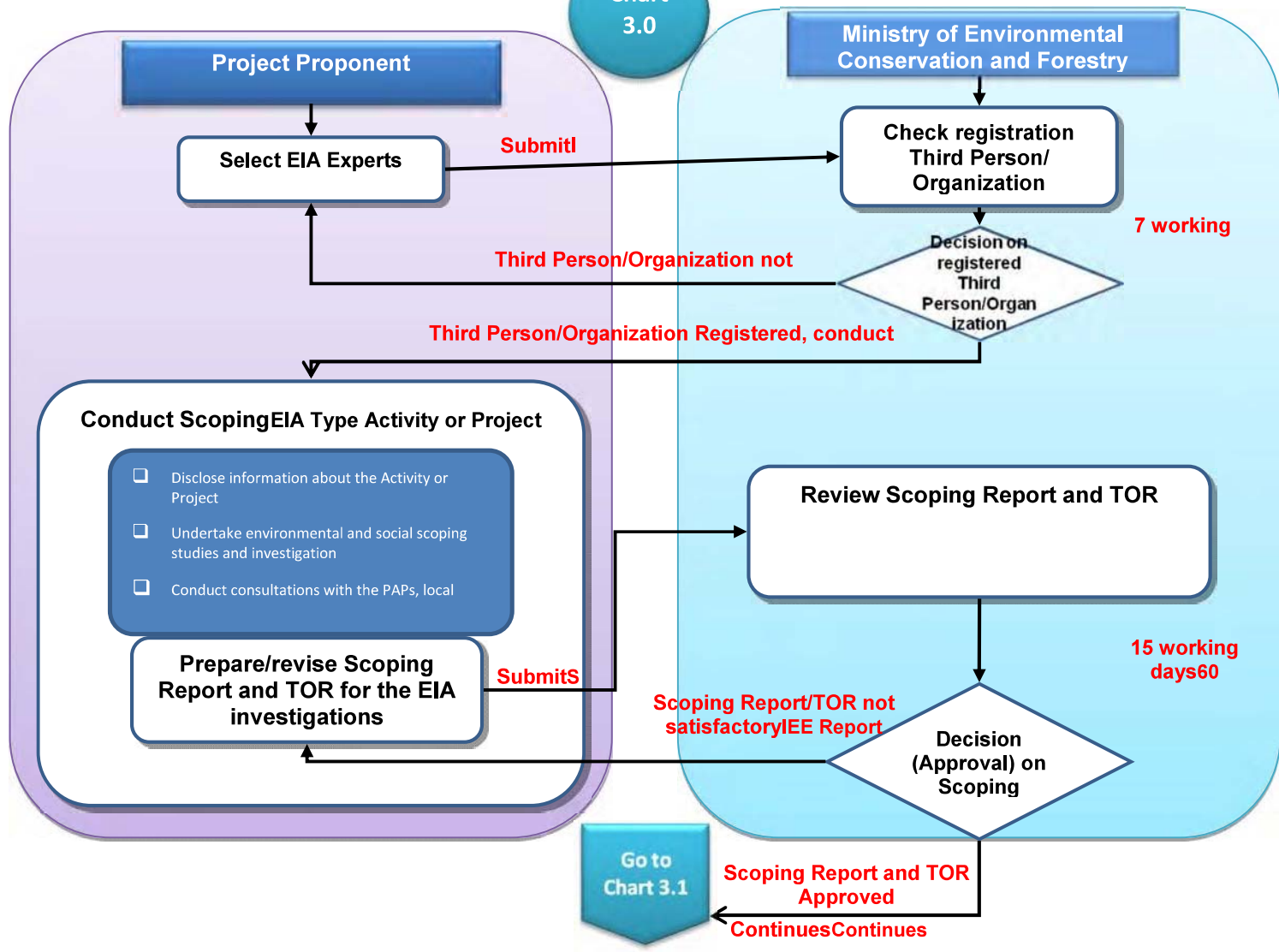
Chart 2.2



A8-48

Scoping (EIA)

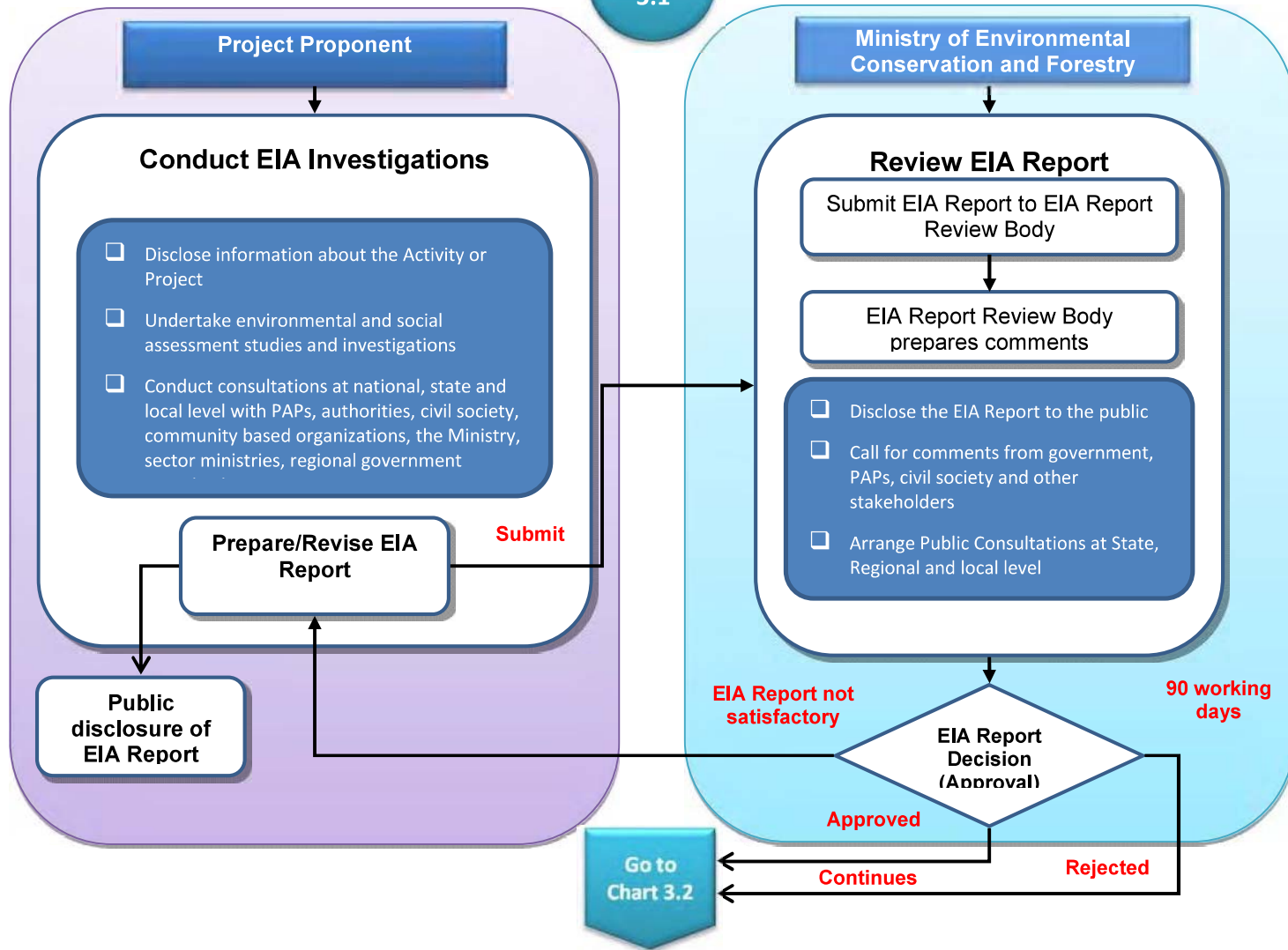
Chart 3.0



A8-49

EIA Investigations and Review

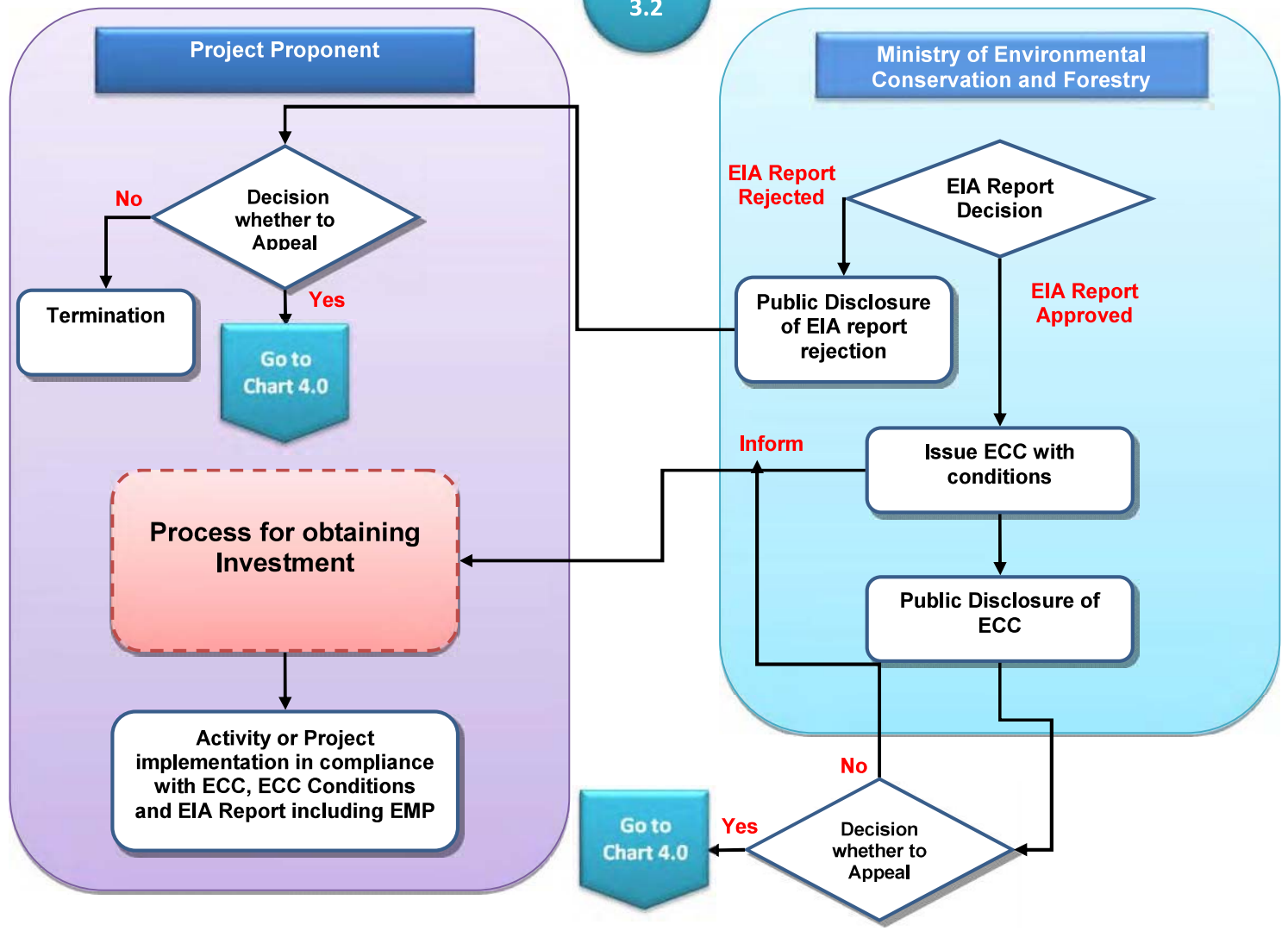
Chart 3.1



A8-50

EIA Review and Approval

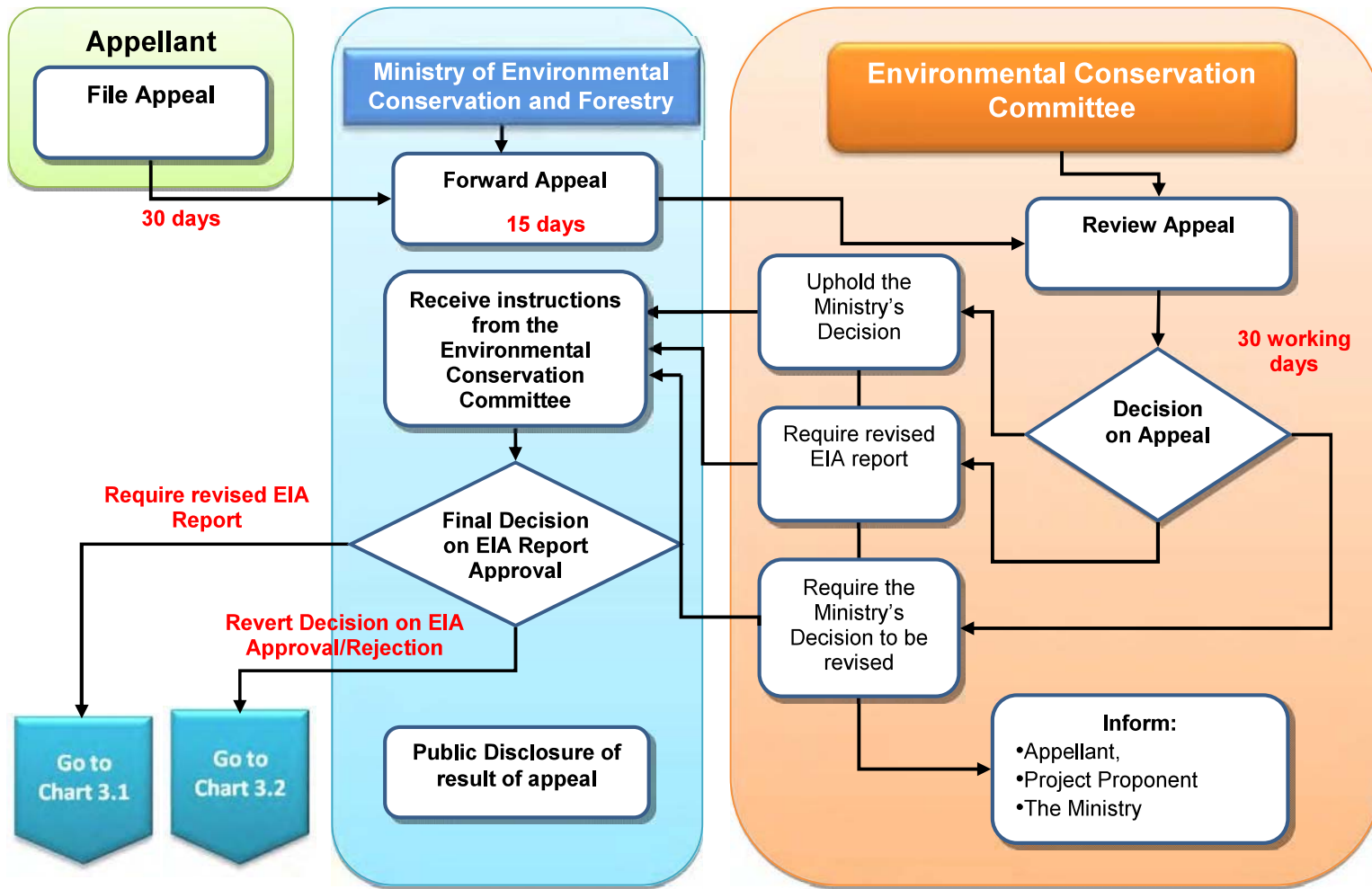
Chart 3.2



A8-51

Appeal Process

Chart 4.0



A8-52

ANNEX 3

Penalties and other Administrative Punishment

No.	Non-Compliance	Penalties	Specific Administrative Punishment of the Ministry
1	Failure or delay in timely submission of reports within period prescribed by Ministry	100 to 500 US\$ or equivalent Myanmar Kyat + 10-25 US\$ / day until cured or equivalent Myanmar Kyat	– Issue Enforcement Notice
2	Obstruction or interference with an official in the course of their duties	250 to 5,000 US\$ or equivalent Myanmar Kyat	– Issue Enforcement Notice – Criminal prosecution
3	Failure to provide information to the Ministry or any representative	1,000 to 5,000 US\$ or equivalent Myanmar Kyat	– Suspension of Approval of EMP, EMP-CP, EMP-OP in whole or in part – Revocation of Approval of EMP, EMP-CP, EMP-OP in whole or in part – Criminal prosecution
4	Failure to provide information to Ministry Inspector or any representative when requested in regard to inspection and monitoring	250 to 5,000 US\$ or equivalent Myanmar Kyat	– Issue Enforcement Notice
5	Undertaking or allowing any preparatory or other construction works without the prior approval by the Ministry of a revised EMP or EMP-CP	1,000 to 5,000 US\$ or equivalent Myanmar Kyat + 50 to 500 US\$ / day until cured or equivalent Myanmar Kyat	– Criminal prosecution

No.	Non-Compliance	Penalties	Specific Administrative Punishment of the Ministry
6	Operating/implementing without a permit, or approval by the Ministry of an EMP or EMP-OP	1,000 to 5,000 US\$ or equivalent Myanmar Kyat + 50 to 500 US\$ / day until cured or equivalent Myanmar Kyat	– Criminal prosecution
7	Non-compliance with an Enforcement Notice or Suspension Notice issued by the Ministry	2,000 to 10,000 US\$ or equivalent Myanmar Kyat + 100-500 US\$ / day until cured or equivalent Myanmar Kyat	– Suspension of Approval of EMP, EMP-CP or EMP-OP in whole or in part – Revocation of Approval of EMP, EMP-CP or EMP-OP in whole or in part
8	Failure to notify to the Ministry of any knowledge of any event of an imminent threat of environmental damage	1,000 to 5,000 US\$ or equivalent Myanmar Kyat	– Issue Enforcement Notice – Suspension of Approval of EMP, EMP-CP or EMP-OP in whole or in part – Revocation of Approval of EMP, EMP-CP or EMP-OP in whole or in part
9	Failure to take reasonable steps to prevent an imminent threat of damage to the environment, social, human health, livelihoods, or property, where applicable based on the EMP, EMP-CP or EMP-OP	2,500 to 10,000 US\$ or equivalent Myanmar Kyat	– Issue Enforcement Notice – Suspension of Approval of EMP, EMP-CP or EMP-OP in whole or in part – Revocation of Approval of EMP, EMP-CP or EMP-OP in whole or in part

No.	Non-Compliance	Penalties	Specific Administrative Punishment of the Ministry
10	Failure to comply with conditions in the ECC and allowable Emission Limit Values	1,000 to 10,000 US\$ or equivalent Myanmar Kyat	<ul style="list-style-type: none"> – Issue Enforcement Notice – Suspension of Approval of EMP, EMP-CP or EMP-OP in whole or in part – Revocation of Approval of EMP, EMP-CP or EMP-OP in whole or in part
11	Failure to pay compensation amounts required in respect of social impacts	1,000 to 10,000 US\$ or equivalent Myanmar Kyat	<ul style="list-style-type: none"> – Issue Enforcement Notice – Suspension of Approval of EMP, EMP-CP or EMP-OP in whole or in part – Revocation of Approval of EMP, EMP-CP or EMP-OP in whole or in part
12	Failure to fully restore social conditions upon resettlement	1,000 to 10,000 US\$ or equivalent Myanmar Kyat	<ul style="list-style-type: none"> – Issue Enforcement Notice – Suspension of Approval of EMP, EMP-CP or EMP-OP in whole or in part – Revocation of Approval of EMP, EMP-CP or EMP-OP in whole or in part

Notes:

1. All penalty amounts set forth in this Annex are denominated in United States Dollars (US\$) and are subject to annual inflation adjustment

2. Abbreviations are as follows:

EMP = Environmental Management Plan

EMP-CP = Environmental Management Plan - Construction Phase

EMP-OP = Environmental Management Plan - Operational Phase

8-2. FRAMEWORK RURAL DEVELOPMENT PLAN

Framework Rural Development Plan

Basic direction of response	Contents of response	Concrete countermeasures	Problems of feasibility	Contents of improvement (infrastructure)	Contents of improvement (organization and institutions)	
1) Agricultural Development						
Expansion of agricultural production volumes	Promotion of double cropping	- Irrigation project	<ul style="list-style-type: none"> • Natural conditions • Bearing of cost • Lack of maintenance 	<ul style="list-style-type: none"> - Construction of small-scale irrigation facilities - Expansion and rehabilitation of water channels 	<ul style="list-style-type: none"> - Strengthening of DRD functions - Rural finance 	
		- Construction of circle levees	Ditto	<ul style="list-style-type: none"> - Construction of circle levees and embankment roads 	Ditto	
		- Dissemination of excellent seeds	<ul style="list-style-type: none"> - Lack of information on excellent seeds - Lack of funds for purchasing - Improvement of excellent seeds 	<ul style="list-style-type: none"> - Seedling raising facilities and equipment according to seed characteristics - Construction of excellent seeds distribution centers 	<ul style="list-style-type: none"> - Enhancement of agricultural research agencies - Rural finance for purchasing - Establishment of an information dissemination system for excellent seeds 	
			- Dissemination of excellent cultivation technologies	<ul style="list-style-type: none"> - Lack of information on excellent cultivation technologies - Lack of funds for purchasing facilities - Improvement of excellent cultivation technologies 	<ul style="list-style-type: none"> - Installation of equipment and facilities for excellent cultivation technologies - Lack of funds for purchasing 	<ul style="list-style-type: none"> - Enhancement of agricultural research agencies
			- Rural villages mechanization	<ul style="list-style-type: none"> - Lack of funds for purchasing machinery 	<ul style="list-style-type: none"> - AMS development 	<ul style="list-style-type: none"> - Rural finance - Securing of technical instructors
			- Improvement of rural roads	<ul style="list-style-type: none"> - Insufficient budget 	<ul style="list-style-type: none"> - Construction and improvement of rural roads 	<ul style="list-style-type: none"> - Strengthening of marketing functions
			- Feed production	<ul style="list-style-type: none"> - • Lack of know-how and technology - • Non-development of sales channels 	<ul style="list-style-type: none"> - Fertilizer plants (bio) - Construction and improvement of rural roads 	<ul style="list-style-type: none"> - Enhancement of agricultural research agencies - Rural finance - Business finance
	Increasing added value for agricultural products	Diversification of agricultural production	- Fruit tree cultivation	<ul style="list-style-type: none"> - Lack of information on excellent cultivation technologies - Expansion of sales channel 	<ul style="list-style-type: none"> - Installation of equipment and facilities for excellent cultivation technologies - Construction of agricultural activities support centers 	<ul style="list-style-type: none"> - Enhancement of agricultural research agencies - Rural finance for purchasing
			- Promotion of horticultural crops	<ul style="list-style-type: none"> - Acquiring of excellent seeds and seedlings - Lack of information on excellent cultivation technologies - Expansion of sales channels 	<ul style="list-style-type: none"> - • Installation of equipment and facilities for excellent cultivation technologies - Construction of agricultural activities support centers 	<ul style="list-style-type: none"> - Enhancement of agricultural research agencies - Rural finance for purchasing

			<ul style="list-style-type: none"> - Road construction and improvement (Securing of rapid delivery to markets) - Power supply (temperature control) 	
	Mushroom cultivation	Ditto	<ul style="list-style-type: none"> - Installation of equipment and facilities for excellent cultivation technologies - Construction of agricultural activities support centers - Road construction and improvement (Securing of rapid delivery to markets) 	Ditto
	- Promotion of the livestock industry	Ditto	Ditto	Rural finance Securing of technical instructors
	- Development of the poultry industry	Ditto	Ditto	Ditto
	- Agricultural products processing (manual work)	<ul style="list-style-type: none"> - Securing of good quality water - Stable supply of electric power for food processing machines - Expansion of sales channels - Lack of technology and know-how 	<ul style="list-style-type: none"> - Water supply utility - Electric power utility (on-grid, off-grid) 	- Support for commodity development (wrapping, etc.)
1.5th-sector industry development	- Promotion of flour milling industry	<ul style="list-style-type: none"> - Securing of good quality water - Stable supply of electric power for food processing machines - Expansion of sales channels - Lack of funds - Lack of technology and know-how 	<ul style="list-style-type: none"> - Power supply utility (On-grid, Off-grid) - Water supply utility - Road improvement - Information infrastructure development 	<ul style="list-style-type: none"> - Support for introduction of technology - Strengthening of capacity for implementation of DRD regional electrification (off-grid) utility - Business finance
	- Promotion of noodle industry	Ditto	Ditto	Ditto
	- Fruit processing	Ditto	Ditto	Ditto
	- Promotion of meat processing industry	Ditto	Ditto	Ditto
6th-sector industry development *	<ul style="list-style-type: none"> - Establishment of companies for agricultural products - Establishment of distribution centers and cold chain 	<ul style="list-style-type: none"> - Securing of good quality water - Stable supply of electric power for food processing machines - Expansion of sales channels - Lack of funds - Lack of technology and know-how - Lack of roads 	<ul style="list-style-type: none"> - All-weather road construction and improvement - Improvement of the water supply utility - On-grid electrification projects - Off-grid electrification projects - Promotion of IT 	<ul style="list-style-type: none"> - Enhancement of business finance - Introduction of foreign currency - Support for establishment of cargo consolidation and delivery systems

2) Expansion of non-agriculture incomes					
Agricultural industrialization	Construction of industrial estates	- Construction of industrial estates	- Access roads to labor markets - Electric power - Industrial water supply - Securing of labor - Lack of know-how and skills - Securing of raw materials	- Development of wide area transportation networks - Construction and improvement of access roads - Industrial water supply - Power supply (for industrial machinery)	- Vocational training - Support measures for promotion of location - Promotion of development of economic corridors and industrial hubs
		- Rural industrialization	Ditto	Ditto	- Vocational training - Support measures for promotion of location
	Development of commuter workers	- Employment in industry in townships and urban parts	- Lack of access roads	- Road construction and improvement - Construction of education facilities	- Vocational training
	Promotion of handicrafts in rural villages	- Textiles and knitting	- Securing of raw materials - Succession and dissemination of skills - Power supply	- Power supply (nighttime lighting) - Water supply - Road construction and improvement	- Vocational training - Rural finance
		- Sewing	Ditto	Ditto	Ditto
- Hardware manufacture	Ditto	Ditto	Ditto	Ditto	
3) Lifestyle Improvement					
Improvement of living conditions	Improvement of access to social infrastructure facilities	- Construction and improvement of all-season roads	- Bearing of costs - Lack of know-how and technology for asset management	- Construction and improvement of all-season roads - Introduction of asset management	- Strengthening of DRD technology and know-how
		- Construction of social infrastructure facilities	- Bearing of costs - Service facilities and technology	- Enhancement of social infrastructure facilities	—
	Access to safe water improvement	- Development of deep-wells	- Lack of power for water pumping - Inability to cover costs - Lack of technology and know-how - Lack of water quality inspection equipment	- Deep-well development	- Establishment of local organizations for managing water - Strengthening of water quality inspection equipment
		- Utilization of non-contaminated spring water	Ditto	- Spring water supply utility	Ditto
Addressing the isolation of village tracts	- Construction and improvement of all-season roads	- Lack of funds - Difficulty in obtaining raw materials	- Construction and improvement of all-season roads	Strengthening of DRD technology	

	Promotion of electrification	- Expansion of on-grid coverage - Promotion of off-grid electrification	- Existence of areas more than 11 miles from the grid - Lack of funds - Lack of generated power	- Power supply utility - SHS projects - Micro hydropower	- Establishment of a land acquisition system Strengthening of DRD technology
Improvement of safety	Securing of safe water Mitigation of natural disaster risks	Already addressed - Reduction of landslide risk areas	Already addressed - Lack of landslide prevention methods and technologies - Bearing of cost	Already addressed - Road improvement	Already addressed - Road improvement technology
4) Structure for Supporting Development Activities					
Small-scale finance in rural villages	—	- Small-scale finance institutions in rural villages	- Credit guarantee	—	- Two-step loan framework - Establishment of rural finance fund
Agricultural improvement dissemination officers	—	- Agricultural improvement dissemination officers	- Construction of agricultural activities support centers	—	- Enhancement of MAS and LBVD
AMS development	Promotion of rural mechanization	- AMS development	- Insufficient budget	—	- AMS enhancement

* In terms of the viewpoint that this aims to add value to and enhance primary industry, this is similar to development of industries that combine production, processing and selling) however, sixth-sector industry is more clearly defined in that it combines processing with marketing.

Note: **Red figures** show infrastructure improvement by relevant sector.

Source: “The Development Study on Sustainable Agricultural and Rural Development for Poverty Reduction Programme in the Central Dry Zone of the Union of Myanmar” JICA, 2010