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CHAPTER 10: ETHIOPIA

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10.1 EIA authority decision-making structure

10 ETHIOPIA

10.1 Constitutional requirements for environmental protection in Ethiopia

The Constitution of the Federal Democratic Republic of Ethiopia, enacted in 1995, is the umbrella for all legislative frameworks in the country. The concept of sustainable development and the environmental rights of the people are clearly stipulated in the Constitution, along with many other provisions. The concept of sustainable development and environmental rights are explicitly stated in Articles 43, 44 and 92 of the Constitution.

Article 43: the right to development identifies peoples' right to:

- 1. Improved living standards and to sustainable development; and
- 2. Participate in national development and, in particular, to be consulted with respect to policies and projects affecting their community.

Article 44 relates to environmental rights and allows all persons:

- 1. To have the right to a clean and healthy environment; and
- Who have been displaced, or whose livelihoods have been adversely affected as a result of state projects, to have the right to commensurate monetary or alternative means of compensation, including relocation with adequate state assistance.

However, it should be noted with regard to Article 44 (2) above, that land is a common property in Ethiopia and the right to all natural resources is vested in the State (Article 40(3)). Farmers have the right to use the land for cultivation and grazing, as well as the right not to be displaced from their homes or land (Article 40(4) and (5)), but the government may expropriate private property for public purposes subject to payment in advance of compensation commensurate with the value of the property (Article 40(8)).

Article 92: environmental objectives are identified as:

- 1. Government shall endeavour to ensure that all Ethiopians live in a clean and healthy environment;
- 2. The design and implementation of projects shall not damage or destroy the environment;
- 3. People have the right to full consultation and to the expression of views in the planning and implementation of environmental policies and projects that affect them directly;
- 4. Government and citizens shall have the duty to protect the environment;
- 5. The State shall maintain land under the ownership of the Ethiopian people and the government but protects security of usufruct tenure;

- 6. Ensures the equality of women with men;
- 7. Maintains an open economic policy.

10.2 Institutional and administrative structure for EIA in Ethiopia

The Constitution of 1995 devolved power to the Regional States, but the Federal Government retains the responsibility for *inter alia*, the following in relation to environmental governance and management:

- Development of policy relevant to economic, social and development matters;
- National standards;
- Protection and preservation of cultural and historical legacies;
- Utilisation and conservation of land and other natural resources, historical sites and objects;
- Transportation and communications;
- Inter-regional and trans-boundary water resources utilisation.

The State governments are responsible for inter alia:

- The execution of State policies;
- The administration of land and natural resources in accordance with State laws.

10.2.1 Federal environmental agencies and institutional arrangements

The Federal Environmental Protection Authority (EPA) was established in 1994 under the Ministry of Natural Resources Development and Environmental Protection, which later became the Ministry of Agriculture and Livestock. In 2002, the EPA was re-established as an independent institution by Proclamation No. 295/2002, with a mandate to regulate and monitor all activities in the country that have an impact on the environment. In 2015, the Ministry of Environment, Forests and Climate Change (MEFCC) was established with a ministerial portfolio which included the EPA (Proclamation No. 916/2015). However, in 2018 the number of ministries in the Ethiopian cabinet was rationalised and the MEFCC was downgraded to the **Environment, Forests and Climate Change Commission (EFCCC)** (under Proclamation No. 1097/2018). The EFCCC is accountable to the Prime Minister, who is also responsible for promoting economic growth in the country, which could cause a conflict of interest.

The duties, powers and responsibilities of the EFCCC are the same as those envisaged under Proclamation 295/2002, namely:

 Coordinate measures to ensure that the environmental objectives provided under the Constitution and the basic principles set out in the Environmental Policy of Ethiopia are realised;

- Prepare, review and update, or as necessary, cause the preparation of environmental policies strategies and laws in consultation with the competent agencies, other concerned organs and the public at large and upon approval, monitor and enforce their implementation;
- Coordinate actions on soliciting the resources required for building a climate resilient green economy in all sectors and at all governance levels as well as provide capacity building support and advisory services;
- Establish a system for the evaluation of investment projects by the relevant sectoral licensing
 organ or the Regional States, prior to granting permission for their implementation;
- Formulate or initiate and coordinate the formulation of policies, strategies, laws and programmes to which Ethiopia is a party;
- Prepare programmes and directives for the synergistic implementation and follow up of environmental agreements ratified by Ethiopia pertaining to the natural resources base, desertification, forests, hazardous chemicals, industrial waste and anthropogenic environmental hazards with the objective of avoiding overlaps, wastage of resources and gaps during their implementation in all sectors and at all governance levels;
- Liaise with competent agencies in the field of environmental protection and rehabilitation and support them in capacity development;
- Establish a system for environmental impact assessment of public and private projects, as well as social and economic development policies, strategies, laws, and programs; and
- Provide advice and support to the Regional States regarding the management and protection of the environment.

Under the same Proclamation (No 295/2002), powers relating to environmental authorisation of projects have been delegated to five line ministries:

- Mines and Petroleum (MoMP);
- Water, Irrigation and Electricity (MoWIE);
- Agriculture and Livestock (MoA&L);
- Transport; and
- Construction.

This means that for any large-scale project in these sectors requiring an environmental impact assessment (EIA) in Ethiopia (as per Schedule 1 of the EIA Porcedures Guidelines, 2003, reproduced in Appendix 10-3), or any project which is trans-regional or trans-boundary in extent, the EIA administrative process is conducted through these line ministries. As required in Proclamation No 295/2002, the line ministries have each established an **Environmental and Community Development Directorate (ECDD)** to administer the EIA process at Federal level (Figure 10.1).

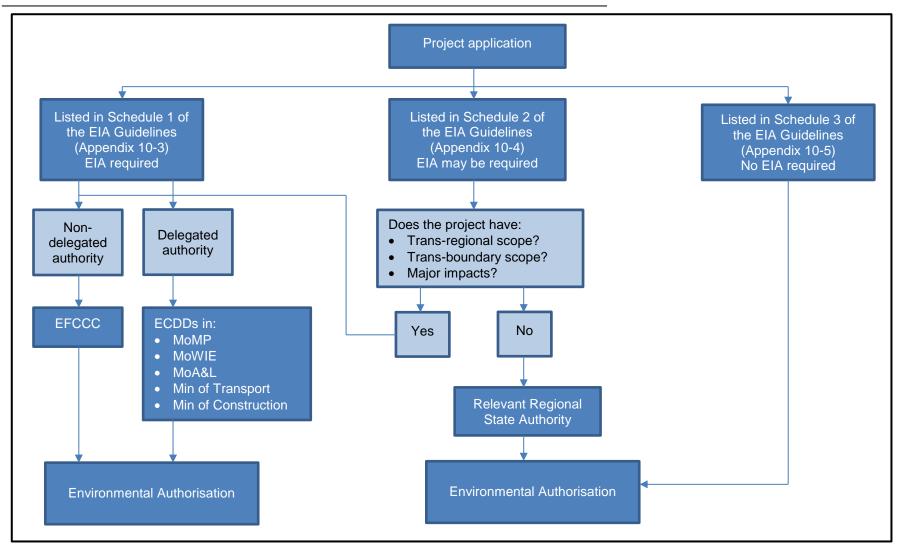


Figure 10.1: EIA authority decision-making structure

For the other line ministries e.g. industry, health, which may have a major project requiring an EIA, the EIA administrative process is conducted by the EFCCC (Figure 10.1).

10.2.2 Regional States environmental authorities

To protect the environment in general and industrial pollution in particular, all Regional States in Ethiopia are obliged by law to establish environment protection, regulating and monitoring bodies. Accordingly, all the regions have established environmental organs, though they have established them under different *names* and *statuses*. Some of them are established as an *authority*, some of them as a *bureau* and some of them as an *agency*.¹ The Regional State authorities are listed below:

- Amhara Regional State: Environment, Forestry, Wildlife Protection and Development Authority.
- Oromia Regional State: Oromia Bureau of Land and Environmental Protection (established by Proclamation No 147 of 2009).²
- Tigray Regional State: Environmental Protection, Rural Land Use and Administration Agency.
- Benishangul Gumuz Regional State: Environment, Forest and Land Administration Bureau.
- Southern Nations, Nationalities and Peoples (SNNP) Regional State: Environment, Forest and Climate Change Authority.
- Afar Regional State: Environmental Protection, Rural Land Use and Administration Agency.
- Gambella People's National State: Land Utilisation, Environmental Protection Authority.
- Somali Regional State: Environmental Protection, Mining and Energy Development Agency.
- Harari People's Regional State: Environmental Protection Authority.
- Addis Ababa City Administration: Environmental Protection Authority.
- Dire Dawa City Administration: Environment, Forest and Climate Change Authority.

Regional Environmental authorities/agencies/bureaux (hereinafter referred to as 'authorities') are responsible for:

- Coordinating the formulation, implementation, review and revision of regional conservation strategies,
- Adopting and interpreting Federal level EIA policies and systems or requirements in line with their respective local realities;
- Environmental monitoring, auditing, protection and regulation of the implementation of projects;
- Establish a system for EIA of public and private projects, as well as social and economic development policies, strategies, laws, or programmes of regional level functions;
- Ensuring the implementation of Federal environmental standards or, as may be appropriate, issue and implement their own no less stringent standards.

¹ http://www.tigraionline.com/articles/tigrai-gtp2-land-use.html

² https://www.ecolex.org/details/legislation/oromia-bureau-of-land-and-environmental-protection-establishment-proclamationno-147-of-2009-lex-faoc150872/

- Preparing reports on the state of the environment and sustainable development of their respective states and submit the same to the EFCCC, and administer, oversee and make major decisions regarding impact assessment of projects and sub-projects;
- Execution of projects and sub-projects likely to have regional impacts.

Thus any project which **may** require an EIA (Schedule 2 of the EIA Procedural Guidelines, 2003 (Appendix 10-4)) at the regional or local level (woreda) within a State will apply for an Environmental Authorisation through the Regional State authorities listed above. If the project needs an EIA, then the application is elevated to the Federal level, but if not, then it is handled at the State level (Figure 10.1). The Regional State environmental authority will issue an Environmental Authorisation, this in turn will be submitted to the relevant line ministry (e.g. MoMP, MoWIE, etc) to be included in the overall operational licence approval by that ministry.

10.3 Policy and legal framework for EIA in Ethiopia

10.3.1 Background

The first attempt to develop environmental policy in Ethiopia dates back to 1989, when the development of the Conservation Strategy of Ethiopia (CSE) was launched. In 1995, the new Constitution of Ethiopia affirmed the right of every Ethiopian citizen to a clean and healthy environment and established the responsibility of the State in ensuring this right. This prompted the development of the Environmental Policy of Ethiopia (EPE) which was finalised in 1997.

A more comprehensive legal and regulatory framework was developed in 2002, in the form of three proclamations, namely (i) Proclamation to Establish an Environmental Protection Unit (No. 295/2002), (ii) Proclamation on Environmental Impact Assessment (No. 299/2002), and (iii) Proclamation on Environmental Pollution Control (No. 300/2002). While these three proclamations provide the overall national framework, the institutional arrangements and responsibilities for environmental and social management at Regional State level, have been explicitly set out in various regulations, guidelines and standards based on the above frameworks.³ It must be noted that even though the EPA no longer exists, these Proclamations still form the basis of environmental law in the country. Therefore references to the EPA in these three Proclamations must be read as the EFCCC and/or relevant line ministry for large-scale projects, and the Regional State environmental authorities for smaller projects.⁴

³ http://www.mofed.gov.et/documents/10182/14041/ESMF+of+One+WaSH-CWA+Phase+II.pdf/7715f9f7-be1a-4d81-9382-9810f6f31869

⁴ See Schedules 1, 2 and 3 of the EIA Procedural Guidelines, 2003 which have been reproduced in Appendices 10-3, 10-4 and 10-5 of this Chapter.

10.3.2 Environmental Policy of Ethiopia

The Environmental Policy of Ethiopia (EPE) was approved by the Council of Ministers in April 1997. Its conceptual framework was based on the findings and recommendations of the CSE. The EPE includes 9 policy objectives, 19 guiding principles, 10 sectoral policies and 10 cross-sectoral policies (one of which is on community participation and another on EIAs).

The EPE expresses key principles and objectives including: (i) ensure that natural resources, both renewable and non-renewable, are used sustainably; (ii) prevent pollution in a cost-effective manner; (iii) organise public participation in environmental management, including improvement of the environment of human settlement areas; and (iv) enhance public awareness, education about, and participation in the national effort for sustainable development and environmental protection. The EPE considers the existence of other sectoral and cross-sectoral policies related to natural resources and the environment, for which it provides the main environmental policy guidelines.

For the effective implementation of the EPE, the policy encourages the creation of an organisational and institutional framework from Federal to community levels. The EPE provides a number of guiding principles in particular, the need to ensure that EIAs:

- Address physical, biological, social, socio-economic, political and cultural impacts and conditions;
- Provide for early consideration of environmental impacts in projects and project design;
- Recognise that public consultation is an integral part of EIA and that provision needs to be made for an independent review and public comments before decisions are taken on the EIA;
- Include mitigation and contingency plans;
- Provide for auditing and monitoring of project implementation;
- Are a legally binding requirement; and
- Institutionalise policy implementation.

The Government is in the process of amending and enhancing the content of the EPE to include principles, rules and standards to address climate change and other issues. However, no draft has been circulated yet and therefore this Chapter refers to the original EPE as enacted in 1997.⁵

10.3.3 National Climate Change Policy

The National Action Plan for climate change was adopted in 2000. Currently, the EFCCC is working to transform the forest sector through the UNDP REDD+ Investment Programme. It has set up the Forest Sector Transformation Unit to promote national climate change policies and strategies.

⁵ Danyo, Stephen; Abate, Asferachew; Bekhechi, Mohammed; Köhlin, Gunnar; Medhin, Haileselassie; Mekonnen, Alemu; Fentie, Amare; Ginbo, Tsegaye; Negede, Betelhem; Tesfaye, Haleluya and Wikman, Anna. 2017. Realizing Ethiopia's Green Transformation: Country Environmental Analysis, Environment and Natural Resources Global Practice. Washington, DC: World Bank

Ethiopia has committed to ambitious targets to achieve the country's economic growth targets. This commitment is detailed in the Growth and Transformation Plan II, Climate Resilient Green Economy Strategy, Nationally Determined Contribution, and the National Forest Sector Development Programme. Specifically, these include:

- Increase forest cover to 20% by 2020 focusing on the improvement of existing natural forests and large-scale afforestation and reforestation activities;
- Increase forestry's contribution to GDP to 8% by 2020; and
- Achieve a 130 MMt CO₂e reduction by 2030 to achieve 50% carbon sequestration and emissions reduction goals by reducing deforestation and forest degradation.

In addition, the country has developed Climate Resilience Strategies for the water and energy sector, as well the agriculture and forestry sector.

10.3.4. Environmental Impact Assessment Proclamation, No 299/2002

This proclamation establishes the requirement for an EIA for all projects, and clearly describes the procedures to be followed by project proponents with respect to EIAs. The proclamation makes EIA mandatory for specified categories of activities undertaken either by the public or private sectors (see Appendices 10-3 to 10-5).

The term 'environment' is defined in this Proclamation as being "the totality of all materials whether in their natural state or modified or changed by humans; their external spaces and the interactions which affect their quality or quantity and the welfare of humans or other living beings, including but not restricted to, land, atmosphere, weather and climate, water, living things, sound, odour, taste, social factors and aesthetics".

The proponent of the project (whether it is a public or private body) must prepare an EIA following the requirements specified in the legislation (Article 8) and associated guidelines (see section 10.3.6 below). The EIA process described in the proclamation underscores the need for consultation where reports are to be made public, and the comments of the public (especially of the project affected people) are to be solicited and taken into consideration during the review process - undertaken by the federal or regional environmental agency in charge of the project. The EFCCC and/or the ECDD in the relevant line ministry, other affected ministries, as well as the relevant Regional State environmental agencies will then review the EIA and either approve the project (with or without conditions) or reject it.⁶

The Proclamation on Environmental Impact Assessment requires, among other things:

Specified categories of projects to be subjected to an EIA and receive an authorisation

⁶ World Bank (2018) ESMF for the OneWash Consolidated Water Supply, Sanitation and Hygiene Account Project (OneWash

[–] CWA) (P167794)

from the EFCCC, delegated line ministry or the relevant Regional State environmental authority prior to commencing implementation of the project (Figure 10.1).

- Licensing agencies (i.e. the EFCCC, relevant line ministries or Regional State environmental authorities) must ensure that the requisite authorisation has been duly received prior to issuing an investment permit, a trade or operating licence or a work permit to a business organisation.
- The EFCCC or the relevant Regional State environmental authorities may issue an exemption from carrying out an EIA in projects presumed to have an insignificant environmental impact.
- A licensing agency may suspend or cancel a licence that has already been issued in cases where the EFCCC or the relevant Regional State environmental authority suspends or cancels the Environmental Authorisation.
- Procedures that need to be followed in the process of conducting an EIA are described in the Proclamation and further elaborated in the draft EIA Procedural Guidelines issued in 2003. Thus, a project developer is expected to act as follows:
 - Undertake a timely EIA, identifying the likely adverse impacts, and incorporating the means of their prevention;
 - Submit an environmental impact study report to the EFCCC, the delegated EDCC under the responsible line ministry and/or the relevant Regional State environmental authority for review and approval.

To put this Proclamation into effect, the government issued an EIA Directive (Directive No 1/2008) and other regulations and procedural guideline documents, which provide details of the EIA process and its requirements (see s. 10.3.5 and 10.3.6).⁷

10.3.5 Regulations on Environmental ImpactAssessment

Based on the Federal EIA Proclamation No 299/2002, many of the Regional States have prepared and put in force their own EIA regulations. Some of these regional EIA regulations put stricter rules on project proponents and EIA practitioners for the preparation of EIAs. For example, the EIA Regulation No 21/2006 issued by the Addis Ababa City government states in its preamble that the purpose of issuing the regulation is to follow up development activities in Addis Ababa city so that they are all implemented in compliance with the conditions of the principles of sustainable development and without obstructing environmental security.⁸

Not all the Regional State laws and regulations are readily available on-line and readers are advised to obtain relevant documents from the Regional State environmental authorities, however they should not differ significantly from the Federal level regulations and guidelines described here.

⁷ World Bank (2018) ESMF for the OneWash Consolidated Water Supply, Sanitation and Hygiene Account Project (OneWash – CWA) (P167794)

10.3.6 Guidelines

Over the years a number of general and sector-specific guidelines on EIA have been developed by the Federal environmental authorities (the former EPA, MoEFCC and others). These guidelines have been adopted in almost the same form by most Regional States, even though some are still officially in 'draft' form.

EIA Guideline Document, November 2000

The EIA guideline document provides essential information covering the following elements:

- Environmental assessment and management in Ethiopia;
- Environmental impact assessment process;
- Standards and guidelines;
- Issues for sector EIA in Ethiopia covering agriculture, industry, transport, mining, dams and reservoirs, tanneries, textiles, hydropower generation, irrigation projects and resettlement.

EIA Procedural Guidelines (draft), November 2003

This guideline will replace the EIA Guideline Document of 2000 if and when it is finally approved. It outlines the screening, review and approval process for development projects in Ethiopia and defines the criteria for undertaking an EIA.

Guideline for the Preparation of Environmental Management Plans (draft), May 2004

These guidelines outline the fundamental contents that need to be featured while preparing an environmental management plan (EMP) for proposed development projects in Ethiopia.

Guideline Series for Reviewing Environmental Impact Statement Reports, January 2003

In 2003, the then EPA prepared a series of Guideline Documents for EIA review with the objectives of:

- Providing a consistent approach for reviewing environmental impact study (EIS) reports;
- Deciding whether there is sufficient information on the background of the project and its environmental setting, alternatives, impacts, mitigation and monitoring;
- Ensuring that all relevant information has been analysed and presented based on appropriate methodologies;
- Ensuring the points of view of all stakeholders have been taken into account;
- Guiding the reviewing process and facilitating decision making;
- Indicating comprehensive information requirements;
- Evaluating the reports in a systematic and objective manner; and
- Providing a structured questionnaire for interpreting the information provided in the report.

The series of guideline documents comprises:

SERIES 1: Guidelines for Review Approach

SERIES 2:	Guidelines for Content and Scope of Report
SERIES 3:	Checklist of Environmental Characteristics
SERIES 4:	Review Criteria

Although these are meant primarily for decision-makers to use at Federal and Regional State level, the information can also be used by consultants and proponents to ensure that the Terms of Reference for EIAs and the EIA reports themselves contain the minimum requirements demanded by the authorities. However, in spite of these Guidelines on EIA review, there are some challenges in their application. Often decisions about projects are made after scoping and the EIA phase is confined to the development of the environmental management plan (EMP). The guidelines have only been published in English (not Amharic), so another guideline document in Amharic has been developed and seems to be more widely used than the English Guidelines. Finally, the capacity of the relevant environmental authorities to critically and objectively review EIA reports is limited.

Environmental and Social Impact Assessment Review Guidelines (draft), April 2017

New review guidelines are in draft but the date of finalisation is unknown – possibly in 2020.

Strategic Environmental Assessment Guidelines (draft), April 2017

These Guidelines on Strategic Environmental Assessment (SEA) set out the legal and policy context for SEAs in Ethiopia, the roles and responsibilities for conducting SEAs, the objectives and benefits of SEAs and the SEA process to be followed.

EIA Guidelines for Mineral and Petroleum Operation Projects, December 2003

In spite of the title, these sector guidelines only provide an overview of the mining industry in Ethiopia and the legal framework for mining, the scope of an EIA for a mining project as well as guidelines on the key issues and impacts that can be expected at each stage of the mine development process – from exploration, through mine development, mineral processing to mine closure and decommissioning, with suggested mitigation and monitoring measures. The guidelines also include occupational health and gender issues related to mining. Appendix 1 of the Guidelines includes tables of environmental standards (see s. 10.3.10 below) and Appendix 2 provides a suggested Table of Contents for a mining EIA report.

Environmental Guidelines for Mineral Operations in Ethiopia, May 2009

This later guideline document for the mining sector provides more detail than the 2003 Guidelines on the EIA process to be followed and the contents of an EIA report for a mining project. It includes guidelines for EIA review and procedural guidance on environmental inspections and monitoring, environmental protection and rehabilitation of mine sites. There is a separate chapter on artisanal mining. It is recommended that the 2003 and 2009 guideline documents are read together as they complement each other.

Integrated Environmental and Social Impact Assessment Guidelines Water Supply, 2004

The guideline focuses on rural and urban water supply projects for human needs. These guidelines highlight major issues and potential impacts that should be taken into account during the preparation and assessment phases. Though the guidelines are meant for water supply the same principles are expected to apply for wastewater management.

Waste Handling and Disposal Guidelines, 1997

The Guidelines are meant to help industry and local authority deal with the waste situation at a local level.

Guideline on Sustainable Industrial Zone / Estate Development

The draft guideline was prepared by the then EPA to provide guidance on the establishment of sustainable eco-industrial zones/estates. The guideline provides the various aspects and issues need to be considered and implemented during industrial zone establishment.

Ethiopian Roads Authority (ERA) Environmental Procedures Manual, 2001

ERA prepared this manual for the use and technical guidance for design personnel of the Ethiopian Roads Authority and consultants doing an Environmental Assessment Study during road design. The manual was developed in order to standardise environmental procedures for design of new roads and rehabilitation of existing roads.

10.3.7 Permits and licences

Any person who wishes to commence with the implementation of a project which requires an EIA must first obtain an **Authorisation** from the relevant authorities (Figure 10.1). This Authorisation must be obtained prior to the Licensing Agency (relevant line ministry) issuing an investment permit or a trade or an operating licence (see section 10.4.1 for more on screening).

Theoretically, permits are also required for activities such as: any discharge into water bodies, collection and disposal of solid or hazardous wastes and operating a business that may cause air or water pollution, but in practice these permits are rarely sought by developers or imposed by the Authorities.⁹

10.3.8 Penalties

The offences and penalties are set out in Part 6 of the EIA Proclamation (Article 18) and are summarised in Table 10.1 below.

⁹ Krueger, James, Gebru, Aman K., and Asnake Inku (2012). Environmental permitting in Ethiopia: no restraint on "unstoppable growth?" Haramaya Law Review, Vol. 1:1.

Offence	Penalty
Failure to obtain an Authorisation as required	50,000 – 100,000 Birr
Make false presentations in the EIS report	
Failure to keep records	10,000 – 20,000 Birr
Failure to fulfil the conditions of approval	
Failure of the Authorities to exercise due diligence during the EIA process	5,000 – 10,000 Birr

Table 10.1: Offences and penalties

In addition, a proponent will be required to repair, restore or compensate for any damage to the environment caused by his/her negligence at their own cost.

10.3.9 Fees

No application or EIA review fees are required.

10.3.10 Environmental standards

There is a long and reluctant history of setting pollution standards in Ethiopia. As early as 1995, the first proclamation establishing the EPA tasked the agency to set environmental standards. In 2002, the Environmental Protection Organs Establishment Proclamation (re-establishing the EPA) again gave EPA the power and duty to set environmental standards, and the Environmental Pollution Control Proclamation, also in 2002, more specifically called on the EPA to set standards for water, air, soil, noise, and waste management. Non-binding ambient 'guidelines' for air, surface water, groundwater, and noise have been in place at the EPA since at least 2004. Nonetheless, the Environmental Council, the governing body of the EPA, did not pass binding standards until 2008, and even then restricted their purview to air and water discharges.¹⁰

Presently, only two types of pollution standards have been adopted: effluent limits on certain water pollutants for a specified list of industries, and limits on certain air pollutants for a specified list of industries. There are no ambient standards for overall air and water quality, despite the fact that these are required by law, although it should be noted that ambient standards would present considerable costs in urban and regional planning, administrative coordination, and air and water testing.¹¹ The World Bank/IFC and WHO standards for noise, vibration and soil contamination should be adopted in the absence of national standards.

10.3.11 Certification of environmental consultants

There are no requirements for consultants to be certified to undertake EIAs in Ethiopia, but EIA consulting companies must be legally registered as companies.

¹⁰ Krueger, James, Gebru, Aman K., and Asnake Inku (2012). Environmental permitting in Ethiopia: no restraint on "unstoppable growth?" Haramaya Law Review, Vol. 1:1.

Table 10.2: Effluent standards for various industrial sectors

Parameter (in mg/l except where shown)	Tanning	Textiles	Iron and steel	Metal work, plating and finishing	Malting, brewing, distilling etc	Sugar	Cement manufacturing	Pharmaceuticals
pH (units)	6 – 9	6 - 9	6 – 9	5.5 - 9.5	6 – 9	6 – 9	6 – 9	6 – 9
BOD at 20°C	200	-	-	-	60	60	25	50
COD	500	150	-	-	250	250	150	250
Suspended solids	50	30	20	25	50	50	50	30
Total ammonia (as N)	30	20	-	-	20	15	-	
Total nitrogen (as N)	60	40	-	-	40	40	-	30
Total phosphorus (as P)	10	10	-	10	5	5	5	5
Oils, fats, and grease	15	20	-	-	15	15	-	15
Mineral oils at oil trap or interceptors	20	20	20	20	20	20	20	-
Chromium (as total Cr)	2	1	1	1	-	-	-	1
Chromium (as Cr VI)	0.1	0.1	0.1	0.1	-	-	-	0.1
Chlorides (as Cl)	1000		-	-	-	-	-	-
Sulphides (as S)	1	2	-	-	-	-	-	-
Phenols	1	1	-	-	-	-	-	1
Mercury (as Hg)	-	0.001	0.01	0.01	-	-	-	0.01
Nickel (as Ni)	-	2	2	1	-	-	-	-
Cobalt (as Co)	-	1	-	-	-	-	-	-
Lead (as Pb)	-	0.5	0.5	0.5	-	-	-	-
Antimony (as Sb)	-	2	-	-	-	-	-	-
Tin (as Sn)	-	5	-	-	-	-	-	-
Arsenic (as As)	-	0.25	-	0.2	-	-	-	0.2
Cadmium (as Cd)	-	1	1	0.5	-	-	-	-
Zinc (as Zn)	-	5	5	1	-	-	-	-
Copper (as Cu)	-	2	-	2	-	-	-	2
Silver (as Ag)	-	-	-	1	-	-	-	-
Benzene, toluene and xylene (combined)	-	1	-	-	-	-	-	-
Organochlorine pesticides (as Cl)	-	0.03	-	-	-	-	-	-
Fluoride (as F)	-	-	-	50	-	-	-	-
Cyanide (as free CN)	-	-	-	0.5	-	-	-	-
Total metals	-	-	-	15	-	-	-	-
Trichloroethane	-	-	-	0.1	-	-	-	-
Trichloroethylene	-	-	-	0.1	-	-	-	-
Absorbable organic halogen compounds	-	-	-	-	-	-	-	2
Organochlorines (each)	-	-	-	-	-	-	-	0.1

 Table 10.3: Limit values for air emissions for various industry sectors

Parameter (in mg/Nm ³ except where shown)	Tanning	Textiles	Iron and steel	Metal work, plating and finishing	Malting, brewing, distilling etc	Sugar	Cement manufacturing	Pharmaceuticals
Total particulates	50	50	50	10	100	100	150	50
Volatile organic carbons g/m ² product produced	75	50	-	-	-	-	-	-
Total hydrogen sulphide, sulphides and	5	-	-	-	-	-	-	-
mercaptans as S ppm								
Hydrogen chloride (as HCl)	-	-	-	-	30	30	-	-
Ammonia ppm	40	-	-	-	-	-	-	-
Acid vapours (as HCI) mg	30	-	-	-	-	-	-	-
Formaldehyde	-	20	-	-	-	-	-	-
Isocyanates (as NCO)	-	0.1	-	-	-	-	-	-
Hydrogen fluoride (as HF)	-	-	5	5	-	-	-	-
Mercury (as Hg)	-	-	0.05	0.05	-	-	-	-
Lead (as Pb)	-	-	0.5	0.5	-	-	-	-
Zinc (as Zn)	-	-	10	10	-	-	-	-
Chromium (as total Cr)	-	-	0.5	0.5	-	-	-	-
Nickel (as Ni)	-	-	0.5	-	-	-	-	-
Cadmium (as Cd)	-	-	0.05	-	-	-	-	-
Nitrogen oxide (as NO ₂)	-	-	1000	-	-	-	2000	-
Sulphur dioxide (as SO ₂)	-	-	800	-	-	-	1000	-
Dioxins ng/Nm ³	-	-	1	-	-	-	-	-

10.4 EIA procedural framework in Ethiopia

The steps required to conduct an EIA are outlined in the following subsections.

10.4.1 Screening

At this stage a proponent initiates the process by submitting the project profile or an initial environmental examination report after undertaking an initial environmental assessment, to the relevant environmental agency. This project profile is normally called a **screening report** or Initial Environmental Examination report, that may describe: the proposed activity and its potential impacts, characteristics of the location (sensitivity of the area), size (small, medium and large scale), degree of public interest, institutional requirements, and environmental enhancement and monitoring considerations.

According to the EIA Procedural Guidelines (2003), projects are categorised into three schedules:

Schedule 1: This category includes projects that may have adverse and significant environmental impacts thus requiring a full EIA study. It also includes projects which may be trans-regional or trans-boundary in scope (see Appendix 10-3 for the full list).

Schedule 2: Projects whose type, scale or other relevant characteristics have potential to cause some significant environmental impacts but are not likely to warrant a full EIA study fall under this group (Appendix 10-4).

Schedule 3: Projects which would have no impact and do not require an EIA (Appendix 10-5).

However, projects situated in an environmentally sensitive area such as land prone to erosion, desertification, areas of historic or archaeological interest, important landscapes, religiously important areas, etc. will fall under Schedule 1 irrespective of the nature of the project (see Appendix 10-1 for a full list of environmentally sensitive areas).

The responsible authority for the EIA will be determined as a result of the screening process (see Figure 10.1).

10.4.2 Scoping

Although the scoping stage is not mentioned in the EIA Proclamation 299/2002, scoping is required according to the EIA Procedural Guidelines, 2003. According to these Guidelines, the aims of scoping are to determine the geographic scope of the EIA studies, identify important issues of concern and to determine the significant effects to be studied further in the impact assessment stage.

The purposes of scoping are to:

Involve potentially affected groups;

- Consider reasonable alternatives;
- Evaluate concerns expressed;
- Understand local values;
- Determine appropriate methodologies;
- Establish the terms of reference for the EIA.

The outcome of scoping is a Scoping Report and/or Terms of Reference for undertaking a full-scale EA. Both of these documents must be reviewed and approved by the relevant authority. The Scoping Report should include as a minimum:

- A brief description of the project;
- All alternatives identified;
- Issues raised by interested and affected parties;
- Description of the public participation.

The Terms of Reference for the EIA should include:

- Background to the proposal;
- Setting the context of the problem;
- Consideration of alternatives;
- Institutional and public involvement;
- Required information regarding project and location, etc.;
- Analysis of impacts;
- Mitigation and monitoring; and
- Conclusions and recommendations.

10.4.3 Impact assessment study

It is the responsibility of the proponent to appoint and pay for EIA specialists to conduct the EIA for his/her proposed project (Article 7 of Proclamation 299/2002). The environmental impact study (EIS) report must contain sufficient information to allow the relevant authority to make an informed decision and to determine the conditions under which an Authorisation can be granted. The EIS report must include as a minimum, the following as per Article 8 of the EIA Proclamation:

- a) A non-technical summary;
- b) Assumptions, confidence limits, limitations and data gaps;
- c) The nature of the project, including the technology and processes to be used;
- d) The content and amount of pollution that will be released during implementation (construction) as well as during operation;
- e) Source and amount of energy required for the operation;
- f) Information on likely trans-regional impacts;
- g) Characteristics and duration of the estimated direct or indirect, positive or negative impacts;
- h) Measures proposed to eliminate, minimise or mitigate negative impacts;

- i) Contingency plans in the case of accidents; and
- j) Procedures for self-auditing and monitoring during implementation and operation.

The EFCCC, relevant line ministry or regional environmental authority shall within **15 working days**, after evaluating an EIS report, and having taken into account any public comment and expert opinions:

- Approve the project without conditions and issue authorisation if it is convinced that the project may not cause negative impacts;
- Approve the project and issue authorisation with conditions that must be fulfilled in order to reduce adverse impacts to an insignificant level; or
- Refuse implementation of the project if the negative impact cannot be satisfactorily avoided even with conditions.

The letter of authorisation shall indicate the validity period of the approval, which will expire if the project has not been implemented within the stated period. The proponent may appeal the validity period as per Article 10(2) and (3) of the EIA Proclamation.

If there are significant changes to the project scope or design after the submission of the EIS, the relevant authority may request that the EIA is revised or re-done to address the new circumstances.

10.4.4 Public participation

The minimum requirement for public participation in terms of the EIA Proclamation 299/2002 is that the relevant authority must make the EIS report available to the public and solicit comments on it. All comments received – especially from affected local communities must be incorporated into the EIS report and considered during the authority review process. However, the EIA Procedural Guidelines 2003, explicitly refer to the need for public consultation to be undertaken during the scoping phase of the project as well (see s. 10.4.2 above).

10.4.5 Appeals

In the event of anyone being dissatisfied with the authorisation of a project, they may submit a grievance notice to the head of the relevant authority, who shall make a decision and advise the complainant within 30 days following receipt of the grievance notice.

10.4.6 Inspections and monitoring

In terms of Article 12 of the EIA Proclamation, the EFCCC, relevant line ministry or the relevant Regional State environmental authority shall audit the implementation of an authorised project in order to ensure compliance with all commitments made by, or obligations imposed on, the proponent during the approval of an EIS report. If the proponent fails to implement the proposed project in compliance with the commitments and obligations articulated in the EMP and the letter of

authorisation, the authorities may request the proponent to rectify the problem and/or suspend the authorisation, and/or in tandem with the licensing ministry, suspend or cancel the operating licence.

Article 7(1) of the Environmental Pollution Control Proclamation empowers the EFCCC and/or the Regional Environmental authority to assign environmental inspectors with the duties and responsibilities of controlling environmental pollution. In order to ensure implementation of environmental standards and related requirements, inspectors belonging to the EFCCC or the relevant regional environmental authority are empowered by the Proclamation to enter, without prior notice or court order, any land or premises at any time, at their discretion. Such wide powers, emanating from this Proclamation, are given to environmental inspectors with the clear intention to protect the environment from pollution, to safeguard and ensure wellbeing of human health as well as to maintain the biota and the aesthetic value of nature.

10.4.7 Strategic environmental assessment

Article 13 of the EIA Proclamation requires an EIA to be conducted for any 'public instrument'. A 'public instrument' is defined as a policy, strategy or programme, law or international agreement; a more detailed list of such instruments is provided in item 27 of the listed activities in Appendix 10-3. Although the Proclamation was gazetted in 2002, guidelines on how a strategic environmental assessment for such public instruments were only published for comment in April 2017 and are still not formally in force (see s. 10.3.6).

10.4.8 Trans-boundary impacts

Ethiopia is a land-locked country, surrounded by Djibouti, Eritrea and Somalia to the north and east, Kenya to the south and Sudan and South Sudan to the west. Furthermore, the country comprises eleven semi-autonomous Regional States. As a result, the consideration of trans-boundary impacts inter-state and between countries is a key issue in Ethiopia and is explicitly required in EIAs.

10.5 Other relevant environmental legislation

A number of sector laws in Ethiopia are relevant to EIA. Table 10.4 provides a summary of the relevant sector legislation.

Sector	Primary agency	Title and date of document	Purpose
Pollution control	MoWIE EFCCC	Regulation No 159/2008, Prevention of Industrial Pollution Regulation	This regulation confers important obligations to industrial operators. A factory subject to the regulations is obliged to prevent or minimize the generation and release of pollutants to a level not exceeding the environmental standards. The regulation also obliges industrial

	Table 10.4:	Other potentially applicable sectoral requirements
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Sector	Primary agency	Title and date of document	Purpose
		Environmental Pollution Control Proclamation, No. 300/2002	operators to handle its equipment, inputs and products in a manner that prevents damage to the environment and to human health. Moreover, the regulations urge industrial operators to prepare and implement an emergency response system of their own. On the other hand, industrial operators are required to prepare and implement internal environmental monitoring systems and keep written records of the pollutants generated and the disposal mechanisms used to get rid of the pollutants. In relation to it, factories are required by the regulation to submit annual compliance reports with the provision of the regulations. The primary objective of this Proclamation is to provide the basis from which the relevant ambient environmental standards applicable to Ethiopia can be developed, and to make the violation of these standards a punishable act. The Proclamation states that the "polluter pays" principle will be applied to all persons. The Proclamation addresses the management of hazardous waste, municipal waste, the establishment of environmental quality standards for air, water and soil; and monitoring of pollution. The proclamation also addresses noise and vibration as sources of environmental pollution and it seeks for standards and limits for it, providing for the maximum allowable noise level considering the settlement patterns.
Health	Ministry of Health	Public Health Proclamation No 200/2000 Health Policy National Policy on HIV/AIDS	This Proclamation deals with various aspects of public health issues including water quality control, waste handling and disposal, availability of toilet facilities, etc. This proclamation critically prohibits discharging untreated liquid waste generated from septic tanks, seepage pits, and industries into water bodies, or water convergences.

Sector	Primary agency	Title and date of document	Purpose
Sector Land expropriation and compensation	Primary agency Federal Government and Regional States	Title and date of document Expropriation of Landholding for Public Purposes & Payment of Compensation Proclamation No 455/2005.	Purpose The proclamation provides for the expropriation of landholdings for public purposes and payment of compensation and establishes the legal principles and framework for expropriation and compensation. Regarding the determination of compensation, the basis and amount of compensation is clearly explained in Article 7(1) which states that "land holder whose holding has been
			expropriated shall be entitled to payment of compensation for his property situated on the land and for permanent improvements he made". Article 7(2) also states that "the amount of compensation for property situated on the expropriated land shall be determined on the basis of replacement cost of the property". Under article 8(1) of this proclamation a displaced land holder whose land holding has been permanently expropriated shall in addition to the compensation payable under the articles of this proclamation be paid displacement compensation, which shall be equivalent to ten times the average annual income he secured to bring the five years preceding the expropriations of the land.
		Regulation for the payment of compensation for property situated on landholdings expropriated for public purposes No 135/2007 of Council of Ministers	The regulation is all about the payment of compensation for property situated on land holdings expropriated for public purposes. It is issued by the council of Ministers for the purpose of not only paying compensation but also to assist displaced persons to restore their livelihood. It narrates clear procedures for implementation of proclamation No 455/2005, for compensation payment for property situated on expropriated land for public benefit. The regulation identified the type of properties eligible for payments of compensation which includes buildings, fences, crops, perennial crops, trees, protected grass, improvement made on rural land; relocated property, mining

Sector	Primary agency	Title and date of document	Purpose
			license and burial grounds.
Employment, Labour and Occupational Health and Safety		The Labour Law, Proclamation No 377/2003	The Labour Proclamation (which was revised in 2003) provides the basic principles, which govern labour conditions taking into account the political, economic and social policies of the GoE and in conformity with the international conventions and other legal commitments to which Ethiopia is a party. The requirements in terms of the protection of workforce health and safety are clearly stipulated in Article 92 of this proclamation. Moreover, this article narrates in detail about Occupational Safety and Health, Health and Working Environment, Prevention Measures and Obligations of the Employers, among others. The law prohibits child employment aged 14 and less and the engagement of young workers (between 14-18) in types of employments that are considered hazardous. The law limits the working hour of young worker to 7 hrs and clearly states that they should not work nights (10 pm-6am), holidays, overtime and weekly rest days. Following the proclamation, the Ministry of Labour and Social Affairs defined type of job young workers should not be engaged in because it is harmful and unsafe. The proclamation obliges an employer
			The proclamation obliges an employer to take all the necessary measures to adequately safeguard the health and safety of the workers. Workforce health and safety is an important aspect considered for identifying the potential environmental, health and safety issues that can arise from the project under implementation.
Water	Ministry of Water, Irrigation and Electricity	Federal Water Resource Management Policy (WRMP)	 Provides a comprehensive approach to integrated water resource management. The overall goal of the policy is to enhance and promote all national efforts towards the efficient, equitable and optimum utilisation of the available water resources of the country for significant socio-economic development on sustainable basis. The specific objectives of the policy include: Promote the development of the

Sector	Primary agency	Title and date of document	Purpose
			water resources of the country for economic and social benefits of the people, on equitable and sustainable basis;
			 Allocate and apportion the water, based on comprehensive and integrated plans and optimum allocation principles that incorporate efficiency of use, equity of access, and sustainability of resources;
			 Manage and combat drought as well as other drought associated impacts, and disasters through efficient allocation, redistribution, transfer, storage and efficient use of water resources; and
			 Conserve, protect and enhance water resources and the overall aquatic environment on sustainable basis.
			The policy requires water resources schemes and projects to have "Environmental Impact Assessment and Evaluation".
		Ethiopian Water Resources Management Proclamation, No 197/2000	The purpose of this Proclamation is to ensure that the water resources of the country are protected and utilised for the highest social and economic benefits of the people of Ethiopia, to follow up and supervise that the water resources are duly conserved, ensure that harmful effects of water are prevented and that the management of water resources is carried out properly.
			The underlying principles include:
			 Integrated basin management; Social and economic development programmes, plans and policies must be based on the Water Resources Policy;
			 Water resources to be managed for the social and economic benefits of the nation;
			Domestic users will have priority over any other water users.
Conservation and biodiversity	Ministry of Agriculture	Ethiopian Wildlife Policy and Strategy	The wildlife policy covers a wide range of policies and strategies relating, amongst others, to wildlife conservation and protected areas. Article 1 sub article 1.1 stipulates the
			need to manage, and properly

Sector	Primary agency	Title and date of document	Purpose
			administer wildlife and habitat even outside protected areas. Based on international criteria, the protected areas of Ethiopia have been divided into four categories, each having its own laws and regulations. The policy document presents the different Categories of Conservation Management. The highest ranked are the National Parks, where strict legislation is applicable. These are followed by Game Reserves, Sanctuaries and finally, Controlled Hunting Areas.
	Ethiopian Wildlife Development and Conservation Authority	National Biodiversity Conservation and Research Policy, April, 1998	One of its aims is to ensure that the genetic resources and essential ecosystems of the country are conserved, developed and sustainably used.
Forests	EFCCC	Proclamation on Conservation, Development and Utilization of Forests (Proclamation No. 94/1994)	The objective of this Proclamation is to provide the basis for sustainable utilisation of the country's forest resources. The Proclamation categorises types of forest ownership (State, Regional and Private Forests), and also gives some specific direction for the utilization of State and Regional Forests, and lists prohibited activities within protected forests.
Gender		National Policy on Women, March 1993	The Policy stresses that all economic and social programmes and activities should ensure equal access of men and women to the country's resources and in the decision making process so that they can benefit equally from all activities carried out by the central and regional institutions.
Culture and Heritage	Authority for Research and Conservation of Cultural Heritage (ARCCH) within the Ministry of Culture and Tourism.	Cultural Policy of Ethiopia, October 1997	
		Research and Conservation of Cultural Heritage Proclamation No. 209/2000	Annex 1 of this proclamation regulates the research and conservation of Ethiopian cultural heritage. Article 42 of the same proclamation states under 'Reserved Area' that ARCCH has the power to issue building permission for any work to be carried out in an area declared a 'Reserved Area' by the Council of Ministers. The removal of any cultural ruins is to be carried out under strict supervision of the responsible authority, ARCCH.

Sector	Primary agency	Title and date of document	Purpose	
Mining	Ministry of Mines and Petroleum	Proclamation to Promote the Sustainable Development of Mineral Resources No. 678/2010, known as the Mining Operations Proclamation amended by Proclamation No. 816/2103	 The objectives of this Proclamation are to: give effect to the principle of the custodianship of the country's mineral resources by the government; promote socio-economic growth of the country; promote employment and advance the social and economic welfare of all Ethiopians; provide for security of tenure for all investors in respect of exploration and mining operations; and ensure that the country's mineral resources are developed in an orderly and sustainable manner. The Amendment makes provision for all holders of a mining licence except artisanal licensees, to prepare and fund a Community Development Plan. 	
		Mining Operations Council of Ministers Regulation No. 423/2018	Article 39 deals with environmental protection; Article 40 provides for an Environmental Impact Restoration Fund; there are various provisions on health, safety and community development	
Energy	MoWIE	Energy Policy of Ethiopia, 1994	 development Encourages the use of indigenous resources and renewable energy. The general objectives of the National Energy policy are: To ensure a reliable supply of energy at the right time and at affordable prices, particularly to support the country's agricultural and industrial development strategies adopted by the government. To ensure and encourage a gradual shift from traditional energy sources To streamline and remove bottlenecks encountered in the development and utilization of energy resources and to give priority to the development of indigenous energy resources with a goal toward attaining self-sufficiency. To set general guidelines and 	

Sector	Primary agency	Title and date of document	Purpose
			 strategies for the development and supply of energy resources. To increase energy utilization efficiency and reduce energy wastage. To ensure that the development and utilization of energy is benign to the environment¹²
Waste	EFCCC	Environmental Pollution Control Proclamation No. 300/2002 Solid Waste Management Proclamation, No. 513/2007	Article 4 addresses the management of hazardous waste, chemicals and radio-active substances. Article 5 deals with municipal waste
	Ministry of Health	Proclamation No. 661/2009	Article 30 dals with waste handling and Article 31 addresses sanitation issues
		Public Health Proclamation No. 200/2000	Article 12 states that "no person shall dispose solid, liquid or any other waste in a manner which contaminates the environment or affects the health of society".
	MoWIE	Water Sector Policy Proclamation No. 197/2000	Articles 11-13 prohibit the release of untreated waste into natural water bodies.

¹² World Bank (2018). Environmental and Social Management Framework (ESMF) for Resilient Landscape and Livelihood Projects

Appendix 10-1: Environmentally sensitive areas and ecosystems

From Annex I of the EIA Procedural Guidelines, 2003¹³

1. Areas prone to natural disasters (geological hazards, floods rain storms, earthquakes, landslides, volcanic activity, etc.).

2. Wetlands (flood plains, swamps, lakes, rivers etc.) and water bodies characterized by one or any combination of the following conditions:

- (a) Tapped for domestic purposes; brick making
- (b) Within the controlled and /or protected areas;
- (c) Which support wildlife and fishery activities;
- (d) Used for irrigation agriculture, livestock grazing.

3. Mangrove swamps characterized by one or any combination of the following conditions:

- (a) With primary pristine and dense growth;
- (b) Adjoining mouth of major river systems;
- (c) Near or adjacent to traditional fishing grounds;
- (d) Which act as natural buffers against shore erosion strong winds and storm floods.
- 4. Areas susceptible to erosion e.g.:
 - (a) hilly areas with critical slopes;
 - (b) Unprotected or bare lands.

5. Areas of importance to threatened cultural groups.

6. Areas with rare/endangered/or threatened plants and animals.

7. Areas of unique socio-cultural history archaeological, or scientific importance and areas with potential tourist value.

8. Polluted areas.

9. Areas subject to desertification and bush fires.

- 10. Coastal areas and marine ecosystems:
 - a) Coral reef;
 - b) Islands;

¹³ Note that the list of sensitive areas includes marine features even though Ethiopia is a landlocked country.

- c) Lagoons and estuaries;
- d) Continental shelves;
- e) Beach fronts etc.;
- f) Intertidal zones.

11. Areas declared as national parks, watershed reserves, forest reserves, wildlife reserves and sanctuaries, sacred areas, wildlife corridors, hot - spring areas.

12. Mountains, water catchments and recharge areas of aquifers.

13. Areas classified as prime agricultural lands or range lands.

- 14. Green belts or public open spaces in urban areas.
- 15. Burial sites and graves.
- 16. Near airports

Appendix 10-2: Potential environmental impacts

From ANNEX II of the EIA Procedural Guidelines, 2003

The potential adverse impacts of concern to be considered during the screening process are as follows:

Socio-economic impacts: falling living standards, particularly of the poor, could risk the start of a vicious circle that could produce further environmental degradation. Living and working conditions may deteriorate as a result of such processes as resettlement, cultural shock, risk to health and safety, the intrusion on sight, sound and smell, etc. Impacts on men and women may be very different, impacts will also vary between social groups, especially where rights to land and other natural resources are differentiated. In-migration related to project development could cause important social changes.

Degradation of land and aquatic environments: major changes in land-use, deforestation, watershed degradation, loss of biodiversity, soil erosion, dry land degradation and overgrazing, salinization, water logging and land-based pollution are all impacts of concern.

Water Pollution: pollution of water courses, aquifers, water bodies and coasts can result from uncontrolled wastewater/sewage discharge from human settlements, industrial effluent,

agricultural chemicals, etc.

Air pollution: pollution of the air may be caused by urban traffic, pollutants may be odour, smell, dust, sulphur dioxide, oxides of nitrogen, ammonia or even storage of volatile liquids, routine industrial emission, upset industrial conditions, etc.

Noise and/or vibration: noise and vibration will be caused by any rotating or reciprocating machinery, but will also be associated with blasting, excavating equipment, road traffic, entertainment, etc.

Damage to wildlife and habitat: impacts that affect biodiversity, ecosystems, rare or endangered species or flora/fauna having economic or scientific importance.

Alterations to ecological processes: e.g. energy transfer bio-accumulation, etc.

Effects on cultural, religious, historic, archaeological and scientific resources: including the effects of in-migrants or tourists.

Climate, especially the hydrological cycle.

Impacts on human health.

Appendix 10-3: List of projects that require full EIA

From Annex III, Schedule 1 of the EIA Procedural Guidelines 2003¹⁴

1. Agriculture

- Water management projects for agriculture (drainage, irrigation)
- Large scale mono-culture (cash and food crops)
- Pest control projects
- Fertiliser and nutrient management
- Land development schemes covering an area of 500 hectares or more to bring forest land into agricultural production
- Agricultural programmes necessitating the resettlement of 100 families or more
- Development of agricultural estates covering an area of 500 hectares or more
- Construction of dams, man-made lakes, and artificial enlargement of lakes with surface areas of 200 hectares or more.
- Drainage of wetlands wildlife habitat or of virgin forest covering an area of 100 metres or more.
- Introduction of new breeds, species of crops, seeds or animals
- Surface water fed irrigation projects covering more than 100 hectares
- Ground water fed irrigation projects more than 100 hectares
- River diversions and water transfers between catchments

2. Livestock and range management

- Large scale livestock movement
- Introduction of new breeds of livestock
- Introduction of improved forage species
- Large scale open range rearing of cattle, horses, sheep etc.
- Large scale livestock production in urban areas
- Large scale slaughter house construction
- Ecto-parasite management (cattle dips, area treatment)
- Intensive livestock rearing units

3. Forestry activities

- Timber logging and processing
- Forest plantation and afforestation and introduction of new species
- Selective removal of single commercial tree species
- Pest management
- Conversion of hill forest land to other land use
- Logging or conversion of forest land to other land use with in the catchments area of reservoirs used for municipal water supply, irrigation or hydropower generation or in areas adjacent to parks
- Logging with special emphasis for endangered tree species
- Large scale afforestation/reforestation, mono-culture forest plantation projects which use exotic free species
- Conversion of forest areas which have a paramount importance of biodiversity conservation to other land use
- Resettlement programs in natural forest and woodland areas

¹⁴ Note that the list includes marine developments even though Ethiopia is a landlocked country.

4. Fisheries activities

- Medium to large scale fisheries
- Artificial fisheries (aquaculture for fish, algae, crustaceans shrimps, lobster or crabs)
- Introduction of new species in water bodies commercial fisheries

5. Wildlife

- Introduction of new species
- Wildlife catching and trading
- Hunting
- Wildlife ranching and farming
- Zoos and sanctuaries

6. Tourism and recreational development

- Construction of resort facilities or hotels along the shorelines of lakes, river, islands and oceans
- Hill top resort or hotel development
- Development of tourism or recreational facilities in protected and adjacent areas (national parks, marine parks, forestry reserves etc) on islands and in surrounding waters
- Hunting and capturing
- Camping activities, walk ways and trails etc.
- Sporting and race tracks/sites
- Tour operations

7. Energy industry

- Production and distribution of electricity, gas, steam and hot water
- Storage of natural gas
- Construction of off shore pipelines in excess of 50 km in length
- High power transmission lines
- Construction of combined cycle power stations
- Thermal power development (i.e. coal, nuclear)
- Hydro-electric power
- Bio-mass power development
- Windmill power development
- Solar (i.e. impact due to pollution during manufacture of solar devices, acid battery spillage and improper disposal of batteries)
- Nuclear energy

8. Petroleum industry.

- Oil and gas fields exploration and development, including construction of offshore and onshore pipelines
- Construction of oil and gas separation, processing, handling and storage facilities
- Construction of oil refineries
- Construction of product deposits for the storage of petrol, gas, diesel, tar and other products within commercial, industrial or residential areas
- Transportation of petroleum products

9. Food and beverage industries

- Manufacture of vegetable and animal oils and fats
- Oil refineries and ginneries
- Processing and conserving of meat
- Manufacture of dairy products

- Brewing, distilling and malting
- Fish meal factories
- Slaughterhouses
- Soft drinks
- Tobacco processing
- Canned fruits, and sources
- Sugar factories
- Other agro-processing industries

10. Textile industry

- Cotton and synthetic fibres
- Dye for cloth
- Ginneries

11. Leather industry

- Tanning
- Tanneries
- Dressing factories
- Other cloth factories

12. Wood, pulp and paper industries

- Manufacturing of veneer and plywood
- Manufacturing of fibre board and of particle-board
- Manufacturing of pulp, paper, sand-board cellulose mills

13. Building and Civil Engineering Industries.

- Industrial and housing estates
- Major urban projects (multi-storey buildings, transport terminals, markets etc.)
- Tourist installations
- Construction and expansion/upgrading of roads, harbours, ship yards, fishing harbours, air fields (having an air strip of 2,500 m or more long) and ports, railways and pipelines
- River drainage and flood control works.
- Hydro-electric and irrigation dams
- Reservoirs
- Storage of scrap metal.
- Military installations
- Construction and expansion of fishing harbours
- Developments on beach fronts

14. Chemical industries

- manufacture, transportation, use and storage of pesticide or other hazardous and or toxic chemicals
- production of pharmaceutical products
- storage facilities for petroleum, petrochemical and other chemical products (i.e. filling stations)
- production of paints, vanishes, etc.

15. Extractive industry

- Extraction of petroleum
- Extraction and purification of natural gas
- Other deep drilling of boreholes and wells
- Mining

- Quarrying
- Coal mining
- Sand dredging

16. Minerals extraction and processing

- Metallic minerals such as iron, lead, copper, nickel
- Industrial minerals such as kaolin, diatomite,
- Construction minerals
- Mineral water
- Thermal water
- Extraction of salts from brines

17. Non-metallic industries (products)

- Manufacture of cement, asbestos, glass, glass-fibre, glass-wool
- Processing of rubber
- Plastic industry
- Lime manufacturing, tiles, ceramics

18. Metal and engineering industries.

- Manufacture and assembly of motor vehicles
- Manufacture of other means of transport (trailers, motor-cycles, motor-vehicles, bicycles)
- Body building
- Boiler-making and manufacture of reservoirs, tanks and other sheet containers
- Foundry and forging
- Manufacture of non-ferrous products
- Iron and steel
- Electroplating

19. Waste treatment and disposal

(a) Toxic and hazardous waste

- Construction of incineration plants
- Construction of recovery plants (off-site)
- Construction of waste water treatment plants (off-site)
- Construction of secure landfills facilities
- Construction of storage facilities (off-site)
- Collection and transportation of waste.
- Installation for the disposal of industrial waste

(b) Municipal solid waste

- Construction of incineration plants
- Construction of composting plants
- Construction of recovery/re-cycling plants
- Construction of municipal solid waste landfill facilities
- Construction of waste depots
- Collection and transportation of waste

(c) Municipal sewage

- Construction of waste water treatment plants
- Construction of marine outfalls
- Night soil collection transport and treatment
- Construction of sewage systems

20. Water supply

- Canalization of water courses
- Diversion of normal flow of water
- Water transfers scheme
- Abstraction or utilization of ground and surface water for bulk supply
- Water treatment plants
- Construction of dams, impounding reservoirs with a surface area of 100 hectares
- Ground water development for industrial, agricultural or urban water supply of greater than 4,000m³/day
- Drainage plans in towns close to water bodies

21. Transport

- Major urban roads
- Rural road programmes
- Rail infrastructure and railways
- Trans-regional and international highways
- Upgrading or rehabilitation of major rural roads
- Airports with basic runways

22. Health projects

• Vector control projects (malaria, bilharzia, trypanosomes, etc)

23. Land Reclamation and land development

- Rehabilitation of degraded lands
- Dredging of bars, groynes, dykes, estuaries etc.
- Spoil disposal

24. Resettlement/relocation of people and animals

- Resettlement plans
- Establishment of refugee camps

25. Multi-sectoral Projects

- Agro-forestry
 - o dispersed field-tree inter-cropping
 - o alley cropping
 - o living fences and other linear planting
 - windbreak/shelterbelts
 - o taungya system
- Integrated conservation and development programmes e.g. protected areas.
- Integrated pest management (IPM)
- Diverse construction public health facilities, schools, storage buildings
- Nurseries, facilities for ecotourism and field research in protected areas, enclosed latrines, small enterprises, logging mills, manufacturing furniture carpentry shop, access roads, well digging, camps, dams, reservoirs
- River basin development and watershed management projects
- Food aid, humanitarian relief

26. Trade: importation and exportation of the following:

- Hazardous chemicals/waste
- Plastics
- Petroleum products

- Vehicles
- Used materials
- Wildlife and wildlife products
- Pharmaceuticals
- Food
- Beverages
- GMOs and GMO-based products

27. Public instruments

- Decisions to change designated status
- Family planning
- Technical assistance
- Development strategies
- Urban and rural land use development plans e.g. Master plans
- Structural adjustment programmes
- National budget
- Policies and programmes formulation, etc.

28. All projects in environmentally sensitive areas (see Appendix 10-1) should be treated as equivalent to Schedule 1 activities irrespective of the nature of the project.

Appendix 10-4: List of projects that require a preliminary environmental impact study

From Annex III, Schedule 2 of the EIA Procedural Guidelines 2003¹⁵

Small-scale activities and enterprises:

- Fish culture
- Bee-keeping
- Small animal husbandry and urban livestock keeping
- Horticulture and floriculture
- Wildlife catching and trading
- Production of tourist handicrafts
- Charcoal production
- Fuel wood harvesting
- Wooden furniture and implement making
- Basket and other weaving
- Nuts and seeds for oil processing
- Bark for tanning processing
- Brewing and distilleries
- Bio-gas plants
- Bird catching and trading
- Hunting
- Wildlife ranching
- Zoos and sanctuaries
- Tie and dye making
- Brick making
- Beach sailing
- Sea weed farming
- Salt pans
- Graves and cemeteries
- Urban livestock-keeping
- Urban agriculture.
- Fish landing stations.
- Wood carving and sculpture
- Hospitals and dispensaries, schools, community centres and social halls, play grounds
- Wood works e.g. boat building
- Market places (livestock and commodities)
- Technical assistance
- Rain water harvesting
- Garages
- Carpentry
- Black smith.
- Tile manufacturing
- Kaolin manufacturing
- Vector control projects e.g. malaria, bilharzia, trypanosomes
- Livestock stock routes

¹⁵ Note that the list includes marine developments even though Ethiopia is a landlocked country.

- Fire belts.
- Tobacco curing kilns
- Sugar refineries
- Tanneries
- Pulp plant
- Oil refineries and ginneries
- artisanal and small scale mining
- Rural road
- Research having the potential to affect ecosystems functions, use, or the health and welfare of the society
- Rural water supply and sanitation
- Land drainage (small scale)
- Sewerage system

Appendix 10-5: List of projects that may not require environmental Impact assessment

From Annex III, Schedule 3 of the EIA Procedural Guidelines 2003¹⁶

1. Social infrastructure and services

- Educational facilities (small scale)
- Audio visual production
- Teaching facilities and equipment
- Training
- Medical centre (small scale)
- Medical supplies and equipment
- Nutrition
- Family planning

2. Economic infrastructure and services

- Telecommunication
- Research, small scale

3. Production sector

- Irrigation
 - \circ $\,$ Surface water fed irrigation projects covering less than 50 hectares $\,$
 - o Ground water fed irrigation projects covering less than 50 hectares
- Agriculture
 - o All small scale agricultural activities
- Forestry
 - Protected forest reserves (small scale)
 - Productive forest reserves (small scale)
- Livestock
- Rearing of cattle (<50 heads); pigs (<100 heads), or poultry (<500 heads)
 - Livestock fattening projects (small scale)
 - Bees keeping projects (small scale)
- Fisheries
 - o Artisanal fisheries (small scale)
- Industry
 - Agro industrial (small scale)
 - o Other small scale industries having no impact to the environment
- Trade
 - o All small scale trades except trade in endangered species and hazardous materials
- Financial assistance
 - Programme assistance
 - Non-project or special country support
 - Food aid not involving GMOs based food
 - Emergency Operations
 - Assistance to refugee returned and displaced person

4. All projects involved in environmental enhancement programmes

¹⁶ Note that the list includes marine developments even though Ethiopia is a landlocked country.

Authority for Research and Conservation of Cultural Heritage	
Conservation Strategy of Ethiopia	
carbon dioxide equivalents	
Environmental and Community Development Directorate	
Environment, Forests and Climate Change Commission	
environmental impact assessment	
environmental impact study	
environmental management plan	
Environmental Protection Authority (now defunct)	
Environmental Policy of Ethiopia	
Ethiopian Roads Department	
Federal Democratic Republic of Ethiopia	
Gross domestic product	
Ministry of Environment, Forests and Climate Change (now defunct)	
million metric tonnes	
Ministry of Mines and Petroleum	
Ministry of Water, Irrigation and Electricity	
Reducing Emissions from Deforestation and Forest Degradation	
Southern Nations, Nationalities and Peoples	
terms of reference	
United Nations Development Programme	

Acronyms

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