

Greening Industries in Ethiopia: Analysis of Laws and Overview of Compliance in Three Industrial Parks

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Abstract

Ethiopia has been developing industrial parks to promote development. Industrial park development process is regulated by international and domestic laws and it envisages green development or sustainable industrial parks. This article investigates the Ethiopian laws and the practices in Bole Lemi I, Kombolcha and Hawassa industrial parks. The methodology of the research mainly focused on laws and some empirical research through interviews, questionnaires, and observation to gather primary data from the three industrial parks as insights to industrial parks under comparable circumstances. The finding reveals that there are legal gaps in environmental standards such as absence of plastic-waste management that ensures green industrial development. There are also gaps relating to the right to fair wage for the workers in the industries under study. The relevant regulatory organs are thus expected to pay due attention to these gaps that should be addressed in tandem with the standards and the path required in sustained economic win-win benefits to investors, employees, and the public in the context of inclusive development and environmental sustainability.

Keywords:

Green industry, industrial parks, sustainable development, green industrial park laws, Ethiopia

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1. Introduction

Greening industries promote economic development in the context of social wellbeing and environmental sustainability. This also applies to all industries including industrial park development activities that should not adversely affect the environment. Various legal norms have been developed to govern green industrial development at the international level. Ethiopia has also enacted green industrial development laws to accelerate industrial park expansion without adversely affecting the environment. This article discusses the laws that govern industrial parks and greening economic activities at the international level and it briefly deals with issues relating to their implementation in Ethiopia in three industrial parks.

Illustrative realities with regard to the level of compliance standards at three industrial parks (Hawassa, Bole Lemi I and Kombolcha) are compared with the norms of green industrial development. The next section highlights the concept of green industry and the role of law in promoting green industry. Section 3 deals with the international norms governing the green industry. Sections 4, 5, 6 and 7 deal with Ethiopian laws relevant to the economic, environmental, and social dimensions commensurate with green industry along with some discussion on the practices in Hawassa, Bole Lemi I and Kombolcha Industrial Parks.

Frequently used Acronyms:

SDGs	Sustainable Development Goals
SMEs	Small and Medium Enterprise

2. Green Industry and the Role of Law in Green Industry

2.1 Definition and nature of green industrial development

As Gehring noted, specific features in the transition to green economy depend on the national circumstances and priorities.¹ ‘Green industry’ may be defined as an industry or manufacture that seeks enhanced economic, environmental and social performance through managing the environmental and resource issues. The definition takes into account the pillars of sustainable development.² It can also be defined as industrial development that employs a process that avoids environmental pollution, conserves natural resources and energy, and is economically sound and safe for the workers, the society as well as consumers.³

According to the United Nations Industrial Development Organization (UNIDO), “[g]reen Industry promotes sustainable patterns of production and consumption, i.e., patterns that are resource and energy efficient, low-carbon and low waste, non-polluting and safe, and which produce products that are responsibly managed throughout their lifecycle.” It further states that under the greening of industries “all industries continuously improve their resource productivity and environmental performance” with a view to creating green industries “that deliver environmental goods and services ... including, for example, waste management and recycling services, renewable energy technologies, and environmental analytical and advisory services.”⁴

The other nature of green industry is that it increases productivity by using resources efficiently, phasing out substances that pollute the environment, and employing renewable energy sources which can “improve occupational health and safety”⁵ while promoting environmental protection. In short, green

¹ Markus W Gehring (2016). “Legal Transition to the Green Economy”, 12(2) *McGill Journal of Sustainable Development Law*, at 142.

² See World Bank Group (2017), *An International Framework for Eco-Industrial Parks*, at 21. Eco-Industrial Park, also known as ‘green industrial park’ is defined as “[a] community of manufacturing and service business located together on a common property. Member businesses seek enhanced environmental, economic, and social performance through collaboration in managing environmental and resource issues. By working together, the community of business seeks a collective benefit that is greater than the sum of individual benefits each company would realize by only optimizing its individuals performance” Ibid.

³ Global Development Solutions (2019), *Green Manufacturing Strategy for Ethiopia* (The Ministry of Industry), at 29.

⁴ UNIDO, *Green Industry Policies for supporting Green Industry*, (United Nations Industrial Development Organization, May 2011, Vienna), at 9.

⁵ Id., at 14.

economy promotes both the productivity of the industry as well as environmental protection. Green industrial development is one of the most important economic vehicles for sustainable development that can bring growth of income and jobs with less impact upon the environment.⁶ In general, green industrial development is industrial development that strives for a more sustainable growth by undertaking environmentally responsible investment. Greening an industry thus aims at sustainable economic growth that promotes sustainable development.

2.2 Green development *versus* sustainable development

Green economy is an eco-friendly principle that involves green technology in economic production, incorporates the protection of environment and socially responsible behaviours of individuals as well as companies, at national and global levels.⁷ The basic goal of green economy is to ensure economic growth in line with increase of employment and salary, where knowledge plays crucial role, and environmental disasters are prevented. Green economy strives to control noise to the acceptable level, the extraction of natural resources, especially the use of fuels, and other production and consumption inputs in a manner that protects the environment.

Thus, the fundamental goal of green economy is to ensure gains in economic development while preserving the environment and promoting sustainable use of the natural resources.⁸ Green economy, in a broader sense, is designed to enhance social inclusion, create employment opportunities and decent jobs for all, eradicate poverty, and sustaining economic growth while preserving the environment.⁹ In short, green economy involves achievements in all pillars of sustainable development,¹⁰ and green growth and environmental sustainability are compatible.¹¹

⁶ Fabiano De Andrade Correa (2013). "The Role of Law in the Green Economy: Challenges and Opportunities for the Liberalization of Environmental Goods and Services" *The World Bank Legal Review*, Vol. 5, 147-161, at 147.

⁷ Olija Munitlak-Ivanovic, Jovan Zubovic, and Petar Mitic (2017). "Relationship between Sustainable Development and Green economy- Emphasis on Green Finance Banking" *Economics of Agriculture* (64) 4 (1467-1482), at 1469.

⁸ *Id.*, at 1469-70.

⁹ Gehring, *supra* note 1, at 144.

¹⁰ Munitlak-Ivanovic; Zubovic, and Mitic, *supra* note 7, at 1470.

¹¹ Guendalina Anzolin and Amir Lebdioui (2021). "Three Dimensions of Green Industrial Policy in the Context of Climate Change and Sustainable Development", *European Journal of Development Research*, Vo. 33(2).

Yet, green economy and sustainable development cannot be equated because they are not identical or interchangeable terms. Green economy,¹² in a narrower sense, is considered as one of the instruments for the implementation of sustainable development.¹³ In fact, both green economy and sustainable development consider the ecological activities in their implementation.¹⁴ Sustainable development is thus the foundation for the realization of green economy. Both concepts aim at economic products that are indeed indispensable in human livelihoods, while protecting the environment, by ensuring the sustainable and wise use of natural resources, and promoting social development.¹⁵

The basic aim of sustainable development is to establish adequate and complementary relationships among extraction of natural resources (ecological aspect), production growth (economic aspect), life conditions (social aspect),¹⁶ and cultural protection.¹⁷ In general, sustainable development requires "... joint action with economic growth (economic efficiency and productivity growth, technology modernization etc.), social progress (socially responsible business with poverty alleviation, public health improvement etc.) an environment (biodiversity protection, reduction of pollution, etc.)".¹⁸

¹² World Bank defines green growth as "economic growth that is efficient in its use of natural resources, clean in that minimizes pollution and environmental impacts and resilience...". International Bank for Reconstruction and Development (2012), *Inclusive Green Growth: The pathway to Sustainable Development* (Washington DC), at 2.

¹³ Gehring, *supra* note 1, at 144; Elisa Morgera and Annalisa Savaresi (2013), "A Conceptual and Legal Perspective on the Green Economy", *RECIEL* 22 (1), at 15. Other instruments are also required to implement sustainable development. Gehring, *Ibid*.

¹⁴ Munitlak-Ivanovic; Zubovic and Miitic, *supra* note 7, at 1471. Today, sustainable development has four pillars vs; the economic pillar, the environmental pillar, the social pillar and the cultural pillar, See Tesfaye Abate Abebe, (2018) *Laws of Investment and Environmental Protection: The case of Large scale Agriculture in Ethiopia*, (LL.D thesis, University of South Africa (UNISA)), at 72-76.

¹⁵ Munitlak-Ivanovic; Zubovic, and Miitic, *supra* note 7, at 1471.

¹⁶ *Id.*, at 1468.

¹⁷ See Abebe, *supra* note 14, at 75.

¹⁸ Stanojevic *et al*, 2013, in Munitlak-Ivanovic; Zubović; and Mitić, *supra* note 7, at 1468.

Although green development protects the environment, it may, for instance, lack green social development aspects.¹⁹ Sustainable development is more concerned with the issue of how industries survive by being productive and continue their development while green development focuses on making development green by focusing on the ecological wellbeing of the environment.²⁰ In general, green economy may be considered as instrument to realize sustainable development in a narrower sense while it is considered as an approach to address the pillars of sustainable development in a broader sense. This article adopts the latter approach.

2.3 Compliance requirements for green industrial parks

Green industrial parks are required to comply “with the national laws, regulations and standards”²¹ and should accordingly comply with “... national employment regulations; discharge limits; national air emissions limits; waste disposal techniques; waste transportation requirements; hazardous waste handling restrictions; and noise limits during operations.”²² In this context, the industrial management should have a monitoring system in place to ensure the compliance of the industries with the national laws. The government is also required to ensure national law compliance by the industrial parks. The requirements include the following *four components of compliance* (i.e. management, environmental, social and economic compliance) that could have variation depending on the specific industrial situations.²³

Industrial park management compliance relates to the need to instil high regulatory compliance. The law may provide for the management and the regulatory body separately.²⁴ To this end, industrial park management must ensure the minimum compliance with regard to the following:

¹⁹ See Mariana Conte Grand & Vanesa D’Elia (2018), “Sustainable Development and “Green”, Concepts”, *Problemas Del DESARROLLO*, Volume 49, No. 192, at 2-3.

²⁰ Xingwei Li, Jiangu Du & Hongyu Long (2019), “Green Development Behaviour and Performance of Industrial Enterprises based on Grounded Theory Study: Evidence from China” *sustainability*, at 3. For the concept of development see, W. M. Adams, (2009), *Green Development: Environment and sustainability in a developing world*, (3rd Edition, Routledge, London), at 7-11.

²¹ World Bank Group, *supra* note 2, at 31-2.

²² *Id.*, at 31.

²³ *Id.*, at 31, 32.

²⁴ Industrial Parks Proclamation No. 886/2015. Article 7(2) of the Proclamation states the role of the industrial park operator in managing the park.

- a) safety and health in the industry, i.e. ensuring that safety cloths and instruments are used properly, preventive measures are employed, and regular medical inspection is undertaken;
- b) laws on crime prevention such as laws to control theft, corruption, violence against women, protection of children and the elderly; and
- c) laws to regulate the environmental and social protections.

Environmental compliance includes compliance with air emission limits such as limits of greenhouse gases, chemical odors, and compliance with the natural resource use such as regulation of water resources, watershed management and water discharge limits. Moreover, it includes compliance with the national law on waste disposal, waste transportation, and hazardous waste handling, as well as noise limits during the operation. It also requires compliance with the limits on effluent and waste discharge to control soil and ground water contamination. With regard to inputs, environmental compliance requires laws on resources and energy efficiency, and it gives due attention to the implementation of principles of reducing, reusing and recycling waste.

Compliance with the environment and biodiversity is also required, and this includes the protection of sensitive marine environment, water bodies, native forests towards the sustainability of the fauna and flora. Furthermore, compliance with national climate change adaptation and mitigation laws are required.²⁵ As enshrined in the National Environmental Compliance Evaluation Checklist, the environmental law compliance by industries in Ethiopia include compliance with the requirements of licence and permit, air emission standards, noise/sound pollution management, energy and greenhouse gases (GHGs), water utilization, waste water and sludge management, solid waste management, hazardous waste management, and chemical management.²⁶

Social compliance for green industrial parks relates to employees, clients and other stakeholders including the community in which the industrial park operates. It requires compliance with human rights such as gender equality, protection of women's and children's rights, compliance with the rights of indigenous people, and compliance with the labour law.²⁷

²⁵ World Bank Group, *supra* note 2, at 32.

²⁶ Federal Democratic Republic of Ethiopia, Environmental Protection Authority, (June 1, 2023), National Environmental Compliance Evaluation Checklist for Industries, (Addis Ababa, Ethiopia). The problem is that the checklist is not a binding law on the industries, and it is very difficult to implement it.

²⁷ World Bank Group, *supra* note 2, at 32.

Economic compliance requires that the national regulation on finance and the economy should be complied with. This includes the law on employment creation and local skills development. It also needs to implement the promotion of SMEs and local business development. Further, technology transfer and intellectual property protection is essential. In addition, skills development and vocational training are crucial for green industrial parks.²⁸

2.4 The role of law in green industry

Law has a crucial²⁹ role in the implementation of green industrial parks at the international and national levels.³⁰ The environmental pollution at the global level has demanded states to adopt green industrial development. This requires undertaking manufacturing activities without adversely affecting the environment,³¹ and the law plays crucial role.³² International legal norms will help the international community to agree on common goals and paths of actions to achieve green development while the national legal norms will be used as mechanisms to implement the agreed goals.³³ At the international level, law is used as essential instrument to achieve the consensus of the international community. It is an instrument to achieve common international goals, such as the protection of the environment and promoting green development.³⁴ Law provides enabling environment for the implementation of green industry.³⁵

In addition to international environmental law, international trade law takes the issue of green economy into account³⁶ in promoting trade related aspects of green economy.³⁷ International investment law also takes into account the

²⁸ Id, at 33.

²⁹ Markus W. Gehring (2016). “Legal Transition to the Green Economy”, *JSDLP-RDPDD*, Vol. 12 Issue 2, 139, at 140.

NB- The title of the Journal (2005-2016) was *McGill International Journal of Sustainable Development Law and Policy* (JSDLP). It is currently *McGill Journal of Sustainable Development Law* since 2017.

³⁰ Correa, *supra* note 6, at 147.

³¹ Weibo Jin *et al* (2023). “Green Development Policies for China’s Manufacturing Industry: Characteristics, Evolution, and Challenges”, *Sustainability*, 15, 10618. <https://doi.org/10.3390/su151310618>, at 7.

³² See generally, Ashwani Kumar and Ashwani Kumar Dwivedi (2023), “The Development of Environmental Law on Green Governance”, *Journal of Law and Sustainable Development*, DOI: <https://doi.org/10.55908/sdgs.v11i6.1182>.

³³ Gehring, *supra* note 1, at 145.

³⁴ Correa, *supra* note 6, at 151.

³⁵ Morgera and Savaresi, *supra* note 13, at 16.

³⁶ Gehring, *supra* note 29, at 151.

³⁷ Id., at 152.

issue of green economy. In general, laws play a crucial role in enabling and supporting a green industrial economy.³⁸

Integrated legal framework promotes and facilitates the enforcement of green industrial policy.³⁹ The law facilitates the integration of economic, environmental, and development policies. It also provides a framework and means for their implementation and enforcement.⁴⁰ National laws provide standards to achieve green industrial development. The law can provide flexible and responsible precautionary principle and indicate a direction to achieve green development by reducing the greenhouse gas (GHG) emission, environmental pollution, and carbon resilient emission; and it ensures the economic, social and environmental benefits and ensure profitable investment.⁴¹ In the combat against climate change, the law provides for energy efficiency and air pollution standards that are among the elements of green development law.⁴²

In general, laws provide environmental standards and industrial standards to regulate the green industrial development. Industrial standards, *inter alia*, require industries to comply with laws including anti-corruption and bribery laws. The second standard is about quality in production while the third standard relates to the management of the industry. The fourth standard relates to the social dimension that includes the human rights of the community.

The fifth standard is the environmental standard which includes climate-carbon, energy, water, waste, animals-livestock, biodiversity, chemicals, forests, and soil.⁴³ Environmental ambient standards include air quality standards, water quality standards, soil and groundwater quality standards, and noise standards that provide the details on each standard.⁴⁴ Industrial

³⁸ *Id.*, at 141.

³⁹ UNIDO, *supra* note 4, at 27.

⁴⁰ *Id.*, at 28. Ainul Jaria Maidin, Humud Abdia Kadous & Siti Sarah Sulaiman (2012), “The Role of law in Fostering Sustainability in built Environment Industry: The Malaysian Experience”, *Australian Journal of Basic and Applied Sciences*, 6(11): 90-96, at 90.

⁴¹ United Nations (2013). *The Role of Legal Instruments to Support Green Low-Emission and Climate-Resilient Development: A Guide Book on Assessing, Selecting, and Implementing Legal Instruments*, at 8.

⁴² See Juan S. Mora-Sanguinetti and Andres Ateinsa-Maeso (January 2024), “Green Regulation: a Quantification of Regulations Related to Renewable Energies and Climate Change in Spain and France” (Working Paper, No. 937,), at 1.

⁴³ USAID, IPDC, and US Forest Service (2019), *Green Manufacturing Strategy for Ethiopia*, at 63.

⁴⁴ See generally, FDRE Environmental Protection Authority (2003), *Guideline Ambient Environmental Standards for Ethiopia*, (Addis Ababa). This standard is not approved

standards are wider than environmental standards and are applicable to all aspects of industries including environmental standards. Countries use various legal mechanisms to regulate industries so as to achieve green development.⁴⁵ However, it is important to note that environmental standards apply not only to industries but also other areas as well.

3. International Norms/Rules Governing Green Industry

Legal frameworks for promoting industries facilitate the integration of economic development and environmental protection as well as their implementation and enforcement.⁴⁶ Thus, laws that deal with the reduction of greenhouse emissions (to protect biodiversity and ecological systems while promoting the long-term, socially inclusive economic growth)⁴⁷ are laws of green industry. Binding and nonbinding laws and commitments have thus been developed to regulate green industrialization at the global level.

The law uses two mechanisms to regulate green industrial development. The first mechanism relates to *technology standards*, requiring using certain technologies, and the second mechanism provides *performance standards*, for instance, setting environmental targets. Recently, laws at international level,

by the relevant body and this impedes its implementation. Directive No. 01/2008 was prepared to approve environmental standards that were set in accordance with Art. 6 of the Environmental Pollution Control Proclamation No. 300/2002. Directive No. 01/2008 (A Directive Issued to Approve Environmental Standards) was expected to be approved by the then Environmental Council, but it has not been approved.

⁴⁵ See Yuliaa Leheza and Olena Surilova (2019), “Legal Regulation of the Application of Economic mechanisms for ensuring the Rational use of natural Resources: The Experience of Foreign Countries”, *Baltic Journal of Economic Studies*, Vol. 5, No. 3, at 100. For instance, Germany, France and Great Britain employ licensing system that regulates efficient natural resource uses (such as water) – the law regulates the amount of water to be taken. The industries are also required to undertake the environmental impact assessment of the implementation of their investment, and they are required to regulate the environmental protection as per the remedies indicated in the assessment document, *ibid.*

⁴⁶ *Id.*, at 27. Industrial park legislation includes the location criteria, quality physical infrastructure, rights to invest and incentives for investors, environmental obligations, and organization of the industrial park. United Nations Industrial Development Organization (2019), *International Guidelines for Industrial Parks* (Cross Disciplinary Team on Industrial Parks), at 20.

⁴⁷ See United Nations (2016). *Greening Africa’s Industrialization* (Economic Report on Africa, Addis Ababa, Ethiopia), at 37.

provide for greater resource efficiency and innovation, for instance through energy efficiency codes for buildings, fuel, water efficiency standards.⁴⁸

Laws also provide environmental licensing and certification for the promotion of green industrial development. Environmental labelling is another mechanism by which the law regulates the industrial activities to ensure environmental protection and industrial activities.⁴⁹ At the international level, two sets of laws⁵⁰ are crucial to regulate green industrial park. They are environmental laws⁵¹ and human rights laws.⁵²

Environmental protection laws in general such as the UN Convention on Climate Change, Convention on Biodiversity, Convention on Environmental Impact Assessment are relevant to green industrial parks.⁵³ The Stockholm Convention aims at protecting human health and the environment from chemicals and persistent organic pollutants.⁵⁴ The Rio+20, soft law documents embody the concept of green economy. In addition, the UN Biodiversity Convention Nagoya Protocol is an essential international instrument that incorporates green economy.⁵⁵

⁴⁸ The International Institute for Sustainable Development (IISD) (2013). *Industrial Policy for a Green Economy* (IISD Report), at 38- 9.

⁴⁹ Leheza & Surilova, *supra* note 45, at 101.

⁵⁰ These environmental laws include the Stockholm Convention on Persistent Organic Pollution; Basel Convention on the Control of transboundary Movements of Hazardous Wastes; Vienna Convention for the protection of the Ozone Layer; Montréal protocol on Substances that deplete the ozone Layer; Ramsar Convention of Wetlands; Espoo Convention on Environmental Impact Assessment in the transboundary Context.

⁵¹ Laws on human rights other than environmental laws include United Nations Guiding principles for Business and Human Rights; the international Bill of Human Rights; international Covenant on Economic, Social and Cultural Rights; Declaration on Social Progress and Development; Convention on the Rights of the Child; Declaration on Fundamental principles and Rights at Work; Convention on the Elimination of All Forms of Discrimination against Women.

⁵² Climate Change Laws that require the reduction of greenhouse gases are crucial international green industrial laws. *See* Mora-Sanguinetti & Atenza-Maeso, *supra* note 42, at 2-3.

⁵³ Gehring, *supra* note 29.

⁵⁴ Stockholm Convention on Persistent Organic Pollutants (POPs) as amended in 2009, Art. 1.

⁵⁵ Gehring, *supra* note 29, at 151.

3.1 The 2015 Paris Agreement

The Paris Agreement has three main components: goals, action areas, and implementation techniques.⁵⁶ Article 2 of the Paris Agreement aims at stabilizing greenhouse concentration by “increasing the ability to adapt to adverse impacts of climate change”⁵⁷ and “to make finance flows consistent with a pathway towards low greenhouse gas emissions and climate resilient development”.⁵⁸

The Paris Agreement provides for low carbon industrial development to respond to climate change problems.⁵⁹ Adaptation plans of energy use are crucial in promoting green industrial development.⁶⁰ The energy adaptation systems undertaken particularly by developing countries are related to the 2030 Sustainable Development Goals (SDGs).⁶¹ Energy adaptation systems of renewable energy or electricity promote green growth and sustainable development.⁶²

3.2 International Guidelines

In 2017, The United Nations Industrial Development Organization (UNIDO), the World Bank Group, and German Development Cooperation / Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) together came up with guideline that would help to achieve Eco-Industrial Park (EIP).⁶³ The guideline provides for a standard or benchmark to bring about sustainable industrial parks (to be complied with by governments and industrial practitioners) to ensure sustainable development of industrial parks, which includes legal compliance, socio-economic, environmental, and management aspects.⁶⁴ The guidelines apply to both governmental and private industries.

⁵⁶ See Pierre-Marie Dupuy, and Jorge E. Vinuales (2018), *International Environmental Law* (Second Edition, Cambridge University Press) at 187.

⁵⁷ The 2015 Paris Agreement, Art 2 paragraph (b).

⁵⁸ *Id.*, Art. 2 paragraph (C).

⁵⁹ Davide M, De Cian E. & Berbiguad A. (2018). *Energy for Adaptation: connecting the Paris Agreement with the Suitable Development Goals*, at 1.

⁶⁰ *Id.*, at 2.

⁶¹ *Id.*, at 4.

⁶² *Id.*, at 10.

⁶³ See the definition of Eco-Industrial Park, at World Bank Group, *supra* note 2.

⁶⁴ World Bank Group, *Ibid.* China has enacted green industry guideline. See The Ministry of Commerce and the Ministry of Ecology and Environment, (2021), *Green Development Guidelines for Overseas Investment and Cooperation*.

They are aimed at achieving sustainable industrial park through the application of inclusive and competitive development principles.⁶⁵

3.3 The right to development

The Right to Development is an inalienable comprehensive human right of economic, social and cultural process achievable by free and active participation of individuals.⁶⁶ The right to sustainable development is recognized under the 1992 Rio Declaration and provides that development should incorporate environmental protection.⁶⁷ The 1992 Rio Declaration makes clear that the right to development must be implemented (Principle 1). It further provides that the right to development must be fulfilled without adversely affecting the environment (Principle 3). States have the prerogative to employ laws and their national development and environmental policies so as to bring about development without adversely affecting the environment (Principle 2). Therefore, environmental protection must be an integral part of the development process so as to achieve sustainable development (Principle 4).

The United Nations, Vienna Declaration and Programme of Action reaffirms the right to development as a universal and inalienable human right.⁶⁸ The concept of sustainable development is incorporated under the Declaration.⁶⁹ The Declaration recognises the role of development policies and laws in achieving sustainable development.⁷⁰ The 2000 Johannesburg declaration also developed principles on sustainable development. Moreover, the United Nations gives due emphasis on sustainable development and poverty reduction,⁷¹ and they are also embodied in national policies and development strategies.

⁶⁵ United Nations Industrial Development Organization (2019), *International Guidelines for Industrial Parks*, at 17.

⁶⁶ Declaration on the Right to Development, resolution adopted by the general Assembly, (resolution 41/ 128 of 4 December 1986), Preamble, 2nd paragraph; Art. 1(1).

⁶⁷ Rio Declaration on Development and Environment, United Nations General Assembly, A/CONF. 151/26 (1992), Principle 1.

⁶⁸ The United Nations, Vienna Declaration and Programme of Action, Adopted by the World Conference on Human Rights in Vienna (1993), Para. 10; Para. 72.

⁶⁹ *Id.*, Para. 11

⁷⁰ *Id.*, Para. 10.

⁷¹ Second United Nations Decade for the Eradication of Poverty, (2010), Resolution adopted by the General Assembly, A/RES/64/216, at 3

3.4 The Sustainable Development Goals (SDGs)

The SDGs aspire to “ensure access to affordable, reliable sustainable and modern energy for all”.⁷² SDGs aim at the availability of water and sanitation for all, and underline that “... [a]ccess to safe water, sanitation and hygiene is the most basic human need for health and well-being” (Goal 6). One of the SDGs aspires to “ensure sustainable consumption and production patterns” (Goal 12). The Sustainable Development Goals further aim at conserving and sustainably use the oceans, seas and marine resources for sustainable development” (Goal 14).

Other aims of SDGs include the need to:

- ‘end poverty in all its forms everywhere’; (Goal 1)
- end hunger, ensure food security and improved nutrition while promoting sustainable agriculture; (Goal 2)
- take measures to combat climate change and its impacts; (Goal 13)
- conserve and sustainably use biodiversity by sustainable use forests, combat desertification, halt and reverse land degradation; (Goal 15) and
- make ‘cities and human settlements inclusive, safe, resilient and sustainable’. (Goal 11)

With regard to green industries, the ninth Goal in SDGs aspires to ‘build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation’.⁷³ This is the central goal that promotes green industrialization. It also aims to promote “peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels” (Goal 16). In short, the SDGs constitute a soft instrument to promote green industry. Governments in the developing countries are required to play their role in working towards and incentivising green industries to achieve the 2030 SDGs.⁷⁴

3.5 Overview of core regional instruments in Africa

The African Charter on Human and People’s Rights recognises the right of all peoples to economic, social and cultural development.⁷⁵ The States are duty

⁷² Sustainable Development Goals, Goal 7.

⁷³ Id., Goal 9. Sustainable Development Goal 9 includes eight targets and twelve indicators.

⁷⁴ See AHM Masum Billah, (2022). *Agenda 2030 Green industrialization for sustainable development*, PID Feature.

⁷⁵ African Charter on Human and People’s Rights (Banjul Charter), adopted June 27, 1981, OAU Doc. CAB/LEG/67/3 rev.5, 21 I.L.M. 58 (1982), entered into force Oct. 21, 1986, Art. 22 (1).

bound to ensure the exercise of the right to development.⁷⁶ In addition, the 2003 Protocol to the African Charter on Human and Peoples Rights on the Rights of Women in Africa provides the right to sustainable development to women.⁷⁷ At regional level, various legal instruments have been developed.

One of the objectives of the *Constitutive Act of the African Union* is to accelerate the socio-economic integration of the continent.⁷⁸ *Agenda 2063* embodies the vision of achieving sustainable development. The Agenda has three essential components: the vision; the transformation framework; and the first 10 year implementation plan.⁷⁹

The Addis Ababa Action Agenda was issued in 2015 by the Third International Conference on Financing for Development and it states how to finance green development. This Action Agenda, among other things, has incorporated important actions that would implement green development such as developing technology to enhance innovation, mobilizing finance from the globe, and strengthening the domestic capacity on resource mobilization.

3.6 Contexts conducive to the realization of the right to development

Green development envisages partnerships that facilitate and encourage the efforts of developing countries. A good example in this regard is the *African Growth and Opportunity Act* which “authorizes new United States trade and investment policy towards Africa”.⁸⁰ This development partnership promotes trade and economic cooperation between United States of America and eligible sub-African countries.⁸¹ Such partnerships are important instruments to promote industrial development. However, it has been suspended regarding exports from Ethiopia owing to sanctions during the civil war in Tigray, and such measures indeed adversely affect pursuits of green industrialization in Ethiopia.

⁷⁶ Id., Art. 22(2).

⁷⁷ The 2003 Protocol to the African Charter on Human and Peoples Rights on the Rights of Women in Africa, Adopted by the 2nd Ordinary Session of the Assembly of the Union, Maputo, Mozambique, 11th July 2003, entered into force 25th November 2005, Art. 19.

⁷⁸ Constitutive Act of African Union, Art. 3(c).

⁷⁹ United Nations Economic Commission for Africa, (2016). *Greening Africa's Industrialization (Economic Report on Africa)*, at 42. The agenda includes 7 aspirations, 20 goals and 34 priority areas. Ibid.

⁸⁰ African Growth and Opportunity Act (AGOA), at 2.

⁸¹ Ibid. AGOA has been enforced since 2000. See United States, (2020), *Biennial Report on the implementation of African Growth and opportunity Act*, (Office of the United States Trade Representative), at 8.

Joint projects at sub-regional level facilitate green development. An example for joint sub-regional pursuits can be the road project under construction that links *Addis Ababa-Nairobi-Mombasa corridor*.⁸² The road will greatly contribute to improve transport and communication among the horn and eastern African countries. It also contributes for the development of Semi-Arid eastern region of Africa.⁸³

It is to be noted that the aforementioned development opportunities and engagements involve not only economic growth but they also envisage the pursuits of economic development in the contexts of social wellbeing and environmental sustainability. All international norms of green development to which Ethiopia is party are part of its laws by virtue of the FDRE Constitution⁸⁴ and apply to regulate green industrial development.

4. Ethiopian Laws governing Green Industrial Development

4.1 Relevant laws in the regulation of sustainable industrial parks

The right to sustainable development has been accepted as human right under various soft and binding laws.⁸⁵ Article 43(1) of the FDRE Constitution provides the right to sustainable development as a human right. Some scholars do not recognize the right to development, while others argue that it is part of human rights.⁸⁶ The UN Declaration on the Right to Development and the African Charter on Human and Peoples Rights incorporate the right to development, while Art. 43 of the Ethiopian Constitution expressly recognizes the “right to improved standards of living and to sustainable development.”

The Constitution of the Federal Democratic Republic of Ethiopia aspires for the advancement of economic and social development.⁸⁷ It also aims at developing one economic community to ensure sustainable and lasting life of the society.⁸⁸ According to Article 43(2), nationals have “the right to

⁸² African Development Bank Group, (2011), *Mombasa-Nairobi-Addis Ababa Road Corridor-Phase III*, Ethiopia and Kenya, at 2.

⁸³ *Id.*, at 3.

⁸⁴ *See* Constitution of the Federal Democratic Republic of Ethiopia Proclamation No. 1/1995, Art. 9(4)

⁸⁵ *See* generally, Iryna Ivankiv (2020), “Right to Sustainable Development as one of Human Rights of Humanity”, *Studia Iuridica* LXXXII

⁸⁶ Dersolegn Yeneabat Mekonen (2020). “Comparing the Status and Recognition of the Right to Development under the RTD Declaration, African Charter on Human and People’s Rights and Ethiopian Constitution”, *International Journal of African and Sian Studies*, Vol. 19, at 67.

⁸⁷ FDRE Constitution Proclamation No. 1/1995, *supra* note 84, preamble 1st Paragraph.

⁸⁸ *Id.*, Preamble 5th Paragraph.

participate in national development in particular to be consulted in policies and projects that affect their community”. This provision requires the government to ensure that the international agreements it concludes promote the right to sustainable development. The International Covenant on Economic, Social and Cultural Rights is one of the international instruments ratified by Ethiopia, and it provides that State parties are obliged to ensure equal right of men and women to the enjoyment of all economic, social and cultural rights.⁸⁹

In the context of industrial parks, the translation of the right to sustainable development into practice requires the implementation of *green* industrial parks that promote development without adversely affecting the environment. Ethiopia has promulgated industrial policy that shows the direction that is to be pursued in the course of industrial development. The industrial policy has the basic objective to promote manufacturing.⁹⁰ Ethiopia’s *Climate Resilient Green Economy Strategy* is aimed at using energy efficient technologies in industries.⁹¹ One of the pillars in the country’s vision for a climate resilient green economy is to invest in green industries.⁹²

The national adaptation plan of Ethiopia (NAP-ETH) embodies a vision to “...create climate change impact resilient development for Ethiopia and its people”. The plan, *inter alia* aims at carbon neutral economy by 2030. It aims to achieve green or low emission economic growth.⁹³

Ethiopian environmental laws, policies, and strategies such as the FDRE (2005) National Biodiversity Strategy and Action Plan can be used in regulating green industrial park development. Moreover, the Investment Proclamation No. 1180/2020 applies to industrial park activities. The Industrial Parks Proclamation No. 886/2015 and the relevant regulations,⁹⁴ as well as directives such as the Ethiopian Investment Board Industrial Parks Directive No. 06/2017 regulate the industrial parks in Ethiopia.

⁸⁹ The International Covenant on Economic, Social and Cultural Rights, Adopted by General Assembly Resolution 2200A (XXI) of 16 December 1966, entered into force 3 January 1976, Art. 3.

⁹⁰ FDRE, Industrial Policy of Ethiopia (2010).

⁹¹ FDRE, *Ethiopia’s Climate Resilient Green Economy Strategy*, (2011) at 9.

⁹² FDRE, *Ethiopia’s Vision for Climate Resilient Green Economy* (2011).

⁹³ Federal Democratic Republic of Ethiopia (2019). *Ethiopia’s Climate Resilient Green Economy: National Adaptation Plan*, at 22.

⁹⁴ See, Industrial Parks Development Corporation Establishment Council of Ministers Regulation No. 326/2014; Industrial Parks Council of Ministers Regulations No. 417/2017.

4.2 Expected returns of laws, policies, strategies and plans

At the international level, it is the sovereign rights of states to dispose their wealth and natural resources without prejudice to international law.⁹⁵ Yet, according to the Art. 9(4) of FDRE Constitution, international law instruments ratified by Ethiopia are part of the law of the country and apply to greening industries. As provided under Art. 4(5) of Proclamation No. 886/2015, the objective of industrial parks in Ethiopia include achievement of sustainable economic development.⁹⁶ Even though this provision does not expressly include other pillars of sustainable development, economic development cannot be sustainable in the absence of social wellbeing and environmental sustainability.

The Ten Year Plan (2021-2030) aims at a long-term strategy for achieving sustainable development by identifying objectives, goals and appropriate institutions as well as leadership.⁹⁷ Moreover, Ethiopian Industrialization Strategy recognizes the importance of preparing disciplined and hardworking *human power* for the efficient industry sector. Thus, starting from education, the Strategy aspires to prepare effective human work power.⁹⁸

Green industrial development indeed requires technological innovation. The Ministry of Innovation and Technology is established with the mandate to initiate laws and policies to foster innovation and technology.⁹⁹ The Ten Year Development Plan is intended to build and organize infrastructure for innovation and research, build human resource capacity, establish institutions and build operational procedures, among others.¹⁰⁰

⁹⁵ International Covenant on Economic, Social and Cultural Rights, adopted by General Assembly Resolution 2200A (XXI) of December 1966, entered into force 3 January 1976, Art. 1(2).

⁹⁶ For general discussion on Ethiopian industrial laws, see, for example Luam Chalachew and Dagnachew Tesfaye (2022), Overview of Industrial Parks laws in Ethiopia <<https://dmethiolawyers.com/major-key-players-in-industrial-parks-the-case-of-ethiopia/>>; see also Ermias Wodajo Azmach, (2019), “Regulating Industrial Parks Development in Ethiopia: A Critical Analysis”, *Beijing Law Review*, available at: <https://doi.org/10.4236/blr.2019.101003> (last accessed on: 20/04/2024).

⁹⁷ Federal Democratic Republic of Ethiopia, Planning and Development Commission, *Ten Year Development Plan: A Path to Prosperity, 2021-2030*, at 14.

⁹⁸ Ethiopian Industrialization Strategy (August 2002) at 14.

⁹⁹ Definition of Powers and Duties of the Executive Organs Proclamation No. 1263/2021, Art. 29(1)(a).

¹⁰⁰ Ten Year Plan, *supra* note 97, at 55.

4.3 Investment law

The Ethiopian Investment Policy aspires for the expansion of investment in manufacturing industry to accelerate economic development.¹⁰¹ As per Art. 5 of Proclamation No. 1180/2020, the basic objective of Investment is to promote sustainable economic and social development.

The incentives accorded to investors include ownership of dwelling house and other immovable property for foreign investor treated as domestic investor to promote investment (Art 18/1) and guarantee to the assets of investors from expropriation or nationalization. In exceptional cases, an investment may be expropriated or nationalized for public interest and only in conformity with the requirements of the law (Art 19/1). In such a case, compensation, corresponding to the prevailing market value shall be paid in advance (Art 19/2). The term ‘nationalization’ is used interchangeably with ‘expropriation’ and compensation must be paid where an investment is nationalized.¹⁰² This widens the investment guarantee.

An investor has the right to remit profits, dividends, and other economic returns from the investment as stipulated under Article 20 of Investment Proclamation No. 1180/2020. Likewise, expatriates employed in an enterprise have the right to remit in convertible foreign currency, salaries and other payments arising from their employment.¹⁰³ These normative standards are indeed commendable because investors are attracted to foreign location in the pursuance of profit and comparative benefits with regard to return to investment. Yet, Proclamation No. 1180/2020 does not clearly indicate the level of attention that must be given to the protection of environment and the promotion of cultural rights.

5. Expected socio-economic gains from industrial parks

The Industrial Park Proclamation aims at accelerating economic development, upgrading industries and promoting employment opportunities.¹⁰⁴ It also aspires to enhance export.¹⁰⁵ It has the objective to regulate the design,

¹⁰¹ Investment Proc. No. 1180/2020, Preamble, 1st paragraph.

¹⁰² *Agreement between the Government of the Federal Democratic Republic of Ethiopia and the Government of the People’s Republic of China Concerning the Encouragement and Reciprocal Protection of Investments*, (1998), Art. 4.

¹⁰³ Id., Art. 20(3); Ethiopian Investment Agency (2013), *An Investment Guide to Ethiopia*, at 30.

¹⁰⁴ *Supra* note 24, First Paragraph of the preamble.

¹⁰⁵ Id., 2nd Paragraph of the preamble.

development and the operation of industrial parks.¹⁰⁶ The regulations enacted with regard to industrial parks in Ethiopia include Council of Ministers Regulations No. 417/2017.¹⁰⁷

5.1 Value chain linkages

It is envisaged that industrial parks would give the opportunity for SMEs. This in turn would enable to provide services and to add values to other industries operating in the park. This is expected to create links between the local businesses as suppliers to the industrial park.¹⁰⁸ This is implicitly embodied in Regulations No. 417/2017, which provides that the industrial park should promote linkages of inputs.¹⁰⁹ This may include the promotion of small and medium enterprises. The Ministry of Trade is obliged to “...create linkage and effective transformation between small, medium and large-scale industries.”¹¹⁰

A research has revealed that industrial parks in Ethiopia get major raw materials as inputs from the local market. This has a positive impact to promote the value chain linkages.¹¹¹ However, a research indicates the challenges relating to inputs to industrial parks.¹¹² In spite of such challenges, there is market linkage (of foreign industries in industrial parks that sell their products) to the local market in the form of wholesale to enterprises.¹¹³

5.2 Job opportunities, skills development and technological transfer

The Industrial Park Proclamation states creation of ample job opportunities as one of the objectives of industrial park development.¹¹⁴ Moreover, Regulations No. 417/2017 reiterates the benefits of industrial parks in the

¹⁰⁶ Id., Art. 4(1).

¹⁰⁷ Industrial Parks Council of Ministers Regulations, Regulations No. 417/2017.

¹⁰⁸ World Bank Group; *supra* note 2, at 51.

¹⁰⁹ Reg. 417/2017, *supra* note 107, Art. 5(3) (d).

¹¹⁰ Proclamation No. 1263/2021, *supra* note 99, Art.21 (1) (1).

¹¹¹ Eskindir Atnafu Berhe (2018). *Socio-Economic Contribution of manufacturing Industrial Parks in Ethiopia: Prospects and Challenges from Stakeholder Perspectives* (MBA Thesis) December 2018 at 97.

¹¹² Id., at 104. A research revealed that the linkage of industrial parks is not clear. The World Bank, (2022), *On the Path to Industrialization: A Review of Industrialization in Ethiopia* (Report, Washington DC), at 3

¹¹³ Berhe, *supra* note 111, at 98.

¹¹⁴ Proc. No. 886/2015, *supra* note 24, Art. 4(5).

creation of job opportunities for citizens¹¹⁵ and it further states that industrial parks promote the transfer of knowledge, skills and technology.¹¹⁶

The Ministry of Industry is empowered to design training programmes that enable transfer of skills and knowledge to Ethiopian workers.¹¹⁷ The Industrial Park enterprise is obligated “to allow entrepreneurship trainings of the technical and vocational education and trainings, collaboration trainings and that of higher education”.¹¹⁸ Likewise, the Ethiopian Investment Commission has enacted Human Resource Guidelines for Industrial Parks, which provides detailed provisions for the recruitment, training and development of workers.¹¹⁹

One of the objectives of Industrial Park is “contributing towards the development of the country’s technological and industrial infrastructure”.¹²⁰ Therefore, technology transfer is expected in the industrial parks. To this end, there should be technology transfer agreement that is required to be registered by the Investment Commission.¹²¹ The Investment Commission will issue a certificate upon the complete application for registration of the agreement.¹²² The law provides that technology transfer that is not registered will not have a legal effect.¹²³ In spite of these stipulations, however, securing a registered technology transfer agreement in industrial parks is not yet the mainstream practice which needs due attention in all industrial parks.

Workers in industrial parks should be trained with the required technologies in cooperation with a higher education institution.¹²⁴ It is indeed encouraging that Ethiopian workers master the required knowledge in the relevant industry within 2 or 3 months. There are also suppliers of inputs who do not work as employees of one industry but supply their product to the industry thereby facilitating the transfer of technology.¹²⁵ Workers in the Industrial Park are given a specialized training before they start to work for the industry. However, as informants stated, there is dissatisfaction of workers

¹¹⁵ Reg. 417/2017, *supra* note 107, Art. 5(3) (a).

¹¹⁶ *Id.*, Art. 5(3) (b)].

¹¹⁷ *Id.*, Art. 18(2).

¹¹⁸ Proc. No. 886/2015, *supra* note 94, Art. 10 (3).

¹¹⁹ Ethiopian Investment Commission (2021). *Human Resource Guidelines for Ethiopian Industrial Parks*.

¹²⁰ Proc. No. 886/2015, *supra* note 24, Art. 4(2)

¹²¹ *Id.*, Art. 21(1)].

¹²² Proc. No. 1180/2020, *supra* note 101, Art. 21(3)).

¹²³ *Id.*, Art. 21(4).

¹²⁴ Proc. No. 886/2015, *supra* note 24, Art. 10(3).

¹²⁵ Interview with informant No.1, Adama, October 4, 2019.

regarding their wage since they complain that it is too low to cover their cost of living.¹²⁶

In Hawassa, for example, as the practice shows, workers from each Zone were recruited and given training by Technology Transfer Institute before they were sent to their jobs at the sheds. Companies provide additional training that is more specialized.¹²⁷ In Kombolcha Industrial Park, systematic activities are not designed to enable employees to benefit from technology transfer¹²⁸ whereas in Bole Lemi I, the Industrial Park is working in a limited manner in this regard.¹²⁹ Yet, industrial parks in general, have created job opportunity, particularly to young women.¹³⁰

It is indeed commendable that various industrial parks are operational. The efforts to attract foreign direct investment in Ethiopia include incentives such as customs duty exemptions that are provided for both domestic and foreign investors engaged in manufacturing.¹³¹ In the context of foreign investors, it aims at promoting the inflow of capital and technology into Ethiopia. Yet, there is the need to monitor the extent to which the objectives highlighted above are in the course of being achieved. In general, the realities on the ground show that, industrial development in Ethiopia “continues to play a marginal role in employment creation, output, export, and in building technological capability; and it is still far from being an engine for growth and economic transformation”.¹³²

6. Environmental Protection in the course of Manufacturing

Ethiopia has enacted various laws and policies to protect the environment while promoting industrial development. The *Environmental Policy* of Ethiopia has the overall policy objective of promoting sustainable social and economic development¹³³ even though it does not clearly incorporate the environmental and cultural aspects of the pillars of sustainable development.

¹²⁶ The World Bank (2022), *On the Path to Industrialization: A Review of Industrialization in Ethiopia* (Report, Washington DC), at 3.

¹²⁷ Interview made with informant No. 2 on October 7, 2019.

¹²⁸ Interview with informant no. 3, Ethiopian Investment Commission Head, Kombolcha Branch, on September 19, 2019.

¹²⁹ Interview with informant no. 4.

¹³⁰ The World Bank, *supra* note 126, at 3.

¹³¹ Ethiopian Investment Agency (2013). *An Investment Guide to Ethiopia*, at 28.

¹³² Arkebe Oqubay (2018). *The Structure and Performance of the Ethiopian Manufacturing Sector* (Working Paper Series, No. 99, African Development Bank Group, June 2018), at 4.

¹³³ The Federal Democratic Republic of Ethiopia, (1997), *Environmental Policy*, at 2.1.

It provides for the *precautionary principle* to control the discharge of waste from industries. It also incorporates the *polluter pays principle* which requires industries to put appropriate mechanisms to control pollution that would have an impact upon the environment.¹³⁴ An industrial park operator is thus duty bound to comply with laws to protect the environment¹³⁵ at levels of environmental compliance commensurate the *precautionary principle* and *polluter pays principle*. Similar obligation is imposed on industrial park enterprises.¹³⁶

The Pollution Control Proclamation¹³⁷ and the Prevention of Pollution Regulations forbid environmental pollution.¹³⁸ Therefore, investors in industrial parks are obliged to prevent damage by their activities to human and animal health as well as the environment.¹³⁹ Industrial parks are also required to implement the Energy Proclamation which aims at electricity and energy conservation and efficiency.¹⁴⁰ The Ten Year Plan, *inter alia*, aspires to provide the rural population with clean energy technologies.¹⁴¹ In addition, the Plan gives due emphasis to the protection of the environment and climate change. Accordingly, it plans to achieve sustainable development by conserving the natural resources. It also aims at reducing greenhouse gas emissions as part of the fight against climate change.¹⁴²

Ethiopia has established environmental standards for industrial pollution control that are applicable to all industrial sectors.¹⁴³ Above all, environmental laws should be applied within the industrial parks.¹⁴⁴ This requires compliance monitoring mechanisms in industrial parks that should be established by the Environment, Forest and Climate Change Commission (currently FDRE Environmental Protection Authority) to supervise the application and enforcement of environmental norms, standards, safeguards, management and mitigation plans.¹⁴⁵

¹³⁴ Id., at 3.8. a and b

¹³⁵ Proclamation No. 886/2015, *supra* note 24, Art. 8(6).

¹³⁶ Id., Art. 10(4).

¹³⁷ Environmental Pollution Control Proclamation No. 300/2002, Art. 3(1).

¹³⁸ Prevention of Industrial Pollution Control Council of Ministers Regulations No. 159/2008, Art. 4.

¹³⁹ Id., Art. 4(2).

¹⁴⁰ Energy Proclamation No. 810/2013.

¹⁴¹ Ten Year Plan, *supra* note 97, at 55.

¹⁴² Id., at 73

¹⁴³ Environmental Standards for Industrial Pollution Control in Ethiopia, at 2.

¹⁴⁴ Proclamation No. 886/2015, *supra* note 24, Art. 24(1).

¹⁴⁵ Id., Art. 24(2).

6.1 Management and Monitoring in Kombolcha, Hawwasa and Bole Lemi I

Environmental management is a process concerning the human-environment relation and it includes environmental performance management of the industries that supports sustainable development.¹⁴⁶ Environmental monitoring is essential to ensure that industrial parks protect the environment. Environmental monitoring may be defined as a systematic observation of water, air and biota to study the environment and derive knowledge about the environment.¹⁴⁷ It is an assessment of environmental and social variables that affect the environment.

One of the purposes of environmental monitoring is to ensure compliance with environmental law.¹⁴⁸ Environmental management and monitoring are crucial in implementing laws of green industries. The park management should thus have personnel that are competent and committed to environmental protection and mitigation. The system they use needs to be in line with the international standard.¹⁴⁹

In Kombolcha Industrial Park, there is a senior environmental protection professional.¹⁵⁰ However, this is not sufficient for effective management and monitoring. At Bole Lemi I Industrial Park, key informants disclosed that none of the activities and standards used in the industry park meets international standards. Ethiopia has promulgated Electrical and Electronic Waste Management and Disposal Council of Ministers Regulation No. 425/2018. Yet, absence of law on plastic waste management and disposal needs due attention. The law should answer how chemicals are disposed. Specific and detailed law/standard is thus required for an industrial park.¹⁵¹

¹⁴⁶ C.J. Barrow (2006), *Environmental Management for Sustainable Development* (Second Edition, Routledge, Taylor & Francis Group), at 6-7.

¹⁴⁷ Rakoid O.O and Bogoliubove V.M (2020). *Environmental monitoring* (Study guide, Second Edition, Kyiv: NUBIP), at 7.

¹⁴⁸ Ibid. other purposes of environmental monitoring include: to inform the decision makers about the environment, to follow up the trends, to establish environmental baseline, to conduct an inventory of natural resources. For further analysis of environmental monitoring, see Oliver Gunther, Franz Josef Radermacher & Wolf Fritz Reikert (1995), *Environmental Monitoring: Models, methods, and Systems*, in: N.M. Avouris, B. Page (eds). *Environmental Informatics – Methodology and Applications of Environmental Information Processing*, Kluwer Academic, Dordrecht.

¹⁴⁹ World Bank Group; *supra* note 2, at 41.

¹⁵⁰ Interview with informant No. 3.

¹⁵¹ Interview with informant No. 4.

Some standards, such as water standards are different from the quality standards required by the World Health Organization (WHO) and others. These standards should be in conformity with each other.¹⁵² Although standards for eco-industrial park certification can vary for different countries, Ethiopia needs to adopt its own certification standards.

Informants also recommended that laws such as the labour law should be updated and suggested that the incentive schemes should be regulated by law in detail. In Hawassa Industrial Park, a research indicated that the requirements for green industry in environmental management are inadequate and the park does not have master plan.¹⁵³

6.2 Water use and waste disposal

Ethiopia has promulgated the proclamation on hazardous wastes in tandem with the Bamako Convention and the Basel Convention.¹⁵⁴ The Proclamation creates a system for treatment, reuse, recycling and transportation as well as disposal and movement of hazardous wastes to prevent harm to human, and animal health, and the environment.¹⁵⁵ It requires the relevant industries to implement clean production principles that include minimizing hazardous waste by reducing or eliminating hazardous substances during the production process, and monitoring the production process.¹⁵⁶

Sustainable water resource usage in industrial parks requires efficiency because the industrial activities should not create water resource scarcity in the locality by unsustainably depleting water resources. Moreover, wastewater should be appropriately treated and reused.¹⁵⁷ This requires Waste Management Plan to ensure environmental protection that involves wastewater treatment facilities that enable the cyclic reuse of treated water.

All hazardous materials should be appropriately stored and disposed,¹⁵⁸ and industrial parks must comply with the provisions of solid waste management

¹⁵² Ibid.

¹⁵³ Doryn Negesa *et al* (2022). “Development of eco-Industrial parks in Ethiopia; the case of Hawassa Industrial park”, *Journal of Industrial Ecology*, 26(1).

¹⁵⁴ Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal, adopted on 22 March 1989, entered into force on the ninety day after the date of deposit of the twentieth instrument of ratification.

¹⁵⁵ Hazardous Waste Management and Disposal Control Proclamation No. 1090/2018, at 3rd Paragraph.

¹⁵⁶ Id., Art. 5.

¹⁵⁷ World Bank Group, *supra* note 2, at 41.

¹⁵⁸ Ibid.

proclamation.¹⁵⁹ Although Ethiopian law requires industrial parks to have waste treatment facilities,¹⁶⁰ there are gaps in the implementation of this obligation. As an informant stated, disposal of solid waste encounters delay and this creates problem at the Hawassa Industrial Park.¹⁶¹ There is the need to enhance the culture of diligence and efficiency in managing waste in general.¹⁶² In Kombolcha Industrial Park, waste is disposed in an area that is used for a similar purpose by the town, and this creates suffocation of the area.¹⁶³ In Bole Lemi I Industrial Park, solid waste from the industrial park is disposed in a similar manner with other industrial parks.¹⁶⁴

In general, waste disposal is a challenge to the industrial parks and the nearby city/towns. In industrial parks, the potential adverse effect of the activities should be considered and there is the need for management, control and mitigating mechanisms. This requires the anticipation of negative impact and prevention of potential damage.¹⁶⁵

6.3 Environmental audit and environmental protection

Environmental audit is a systematic, periodic and documented objective review of the environment to assess the extent to which the requirements of environmental protection are met. It may be defined as:

a management tool comprising a systematic, documented, periodic, and objective evaluation of how well environmental organization, management and equipment are performing with aim of helping to safeguard the environment by, (i) facilitating management control of environmental practices; (ii) assessing compliance with company policies which would include meeting regulatory requirements.¹⁶⁶

Environmental audit was conducted at Hawassa Industrial Park by the coordinated efforts of the relevant regional state and federal government offices; and appropriate remedial activities have been undertaken.¹⁶⁷ Moreover, Environmental Impact Assessment was made by international

¹⁵⁹ See Solid Waste Management Proclamation No. 513/2007, Arts 7-15.

¹⁶⁰ Regulations No. 417/2017, *supra* note 107, Art. 11(2)(C).

¹⁶¹ Interview conducted with informant No. 5, on February 2, 2021

¹⁶² Interview conducted with informant No. 6, in Hawassa, on February 2, 2021

¹⁶³ Interview with informant.

¹⁶⁴ Interview with Informant.

¹⁶⁵ World Bank Group; *supra* note 2, at 41.

¹⁶⁶ International Chamber of Commerce in Irwansyah, Wardhani Hakim, and Ahsan Yunus, (2017), "Environmental audit as an instrument for environmental protection and management, *The business and management review*, Vol. 9, No, 2, at 230.

¹⁶⁷ Interview with informant No 7, on October 8, 2019

consultants.¹⁶⁸ There were also efforts to prevent soil erosion, to flash water during construction, and control flood on streets and roads.¹⁶⁹

In Bole Lemi I, no environmental impact assessment was made other than social impact assessment. An informant stated that the roads in the Park have dissected the Church in the locality, and the problems were noticed at a later stage¹⁷⁰ while impact assessment could have proactively prevented such problems. The informant indicated that there is no environmental protection representative, and it is argued that it is not visible to assign an environment expert in the industrial park since there is no work to be performed 8 hours per day.

In Bole Lemi I Industrial Park, the environmental problem starts from the location of the park. As the park is located near the Addis Ababa Sewerage, it is exposed to bad odour, which has been causing difficulties to the investors and visitors.¹⁷¹ According to an informant, the level of labour productivity is low thereby adversely affecting profitability.¹⁷² There are legal gaps such as absence of plastic pollution management law, water quality standard law¹⁷³ and no separate environmental standards are provided as aspired by the environmental protection law.¹⁷⁴

With regard to the implementation of the law that envisages green industrial development, there are gaps in all the three parks under the case study: i.e., Hawassa, Kombolcha and Bole Lemi I Industrial Parks. Informants stated that there is lack of supervision of the industrial park in Hawassa by the federal regulatory office.¹⁷⁵ The practice of environmental protection is not up to the required standard, for example, in Kombolcha Industrial Park water is released after treatment. However, the treatment plant is not working with its full capacity. Reuse of water is not practiced under the pretext of the availability of sufficient ground water; and water is directly released to the river Borkena.¹⁷⁶

¹⁶⁸ Interview with informant No. 8, Awassa, on October 8, 2019

¹⁶⁹ Ibid.

¹⁷⁰ Interview with informant No. 4.

¹⁷¹ Ibid.

¹⁷² Ibid.

¹⁷³ Interview with informant No. 4.

¹⁷⁴ Ibid.

¹⁷⁵ Key Informant No. 9, Environmental Control and Supervision officer, February 2, 2021.

¹⁷⁶ Interview with Informant.

Even if an informant appreciated the jobs that are created at Hawassa Industrial Park, other key informants who are environmental control experts stated that, the laboratory result and video revealed that the Hawassa Industry Park is polluting Lake Hawassa.¹⁷⁷ The informants noted that the industrial park did not sustain its earlier practice of wastewater treatment because the Industrial Park is at present releasing the polluted water sometimes to the lake without treating it.

The legal department in Hawassa Environmental Protection Office could have performed its mandate properly commensurate with these problems. In general, according to the key informants, the Industrial Park clearly causes pollution to air, soil, and water. This researcher has also witnessed that polluted water was released to the Lake through the sewerage line. There is no environmental protection team in the Park. A key informant commented that a legal expert should be recruited in the park to supervise that the activities are performed in a manner that respects environmental compliance standards.¹⁷⁸ There is no horizontal coordination in protecting the environment, and the relationship is not smooth to achieve the intended goal.¹⁷⁹

According to the informant, the salary scale at the environmental protection Bureau does not attract and retain competent lawyers so as to litigate in courts of law and handle environmental issues. Thus, indigenous trees have been cut and the environmental Protection Office of the City of Hawassa could not follow the case seriously and professionally due to lack of legal professionals.¹⁸⁰ Another gap in Hawassa relates to absence of consultation of the local community in federal projects regarding the compliance of the projects to the required environmental standards, because according to an informant such consultations only relate to non-federal projects.¹⁸¹ These gaps are very harmful in manufacturing activities such as textile owing to high use of chemicals and lack of functional sewerage network at the time of this research.

¹⁷⁷ Interview conducted with Key Informants 9, 10 and 11, Environmental Control and Supervision officers, Interviewed on December 4, 2020.

¹⁷⁸ Ibid.

¹⁷⁹ Ibid.

¹⁸⁰ Ibid.

¹⁸¹ Key Informant 12, Environment and Social Impact Assessment Expert, interviewed on February 4, 2021

As a key informant stated, although there is a structure for environmental expert in the park, the job assignment was not put into effect.¹⁸² It is argued that the park has conducted Environmental Impact Assessment (EIA). However, the respondents questioned how the Park implements it, because the practice at the grassroots is full of problems although the EIA document was prepared.¹⁸³ This indicates that the implementation of environmental protection law is not given due attention. In general, there is a gap in environmental protection law implementation in the three industrial parks under study.

7. Respect to human rights, labour rights and corporate social responsibility

Bilateral investment treaties provide that the investors are required to undertake investments in accordance with the host state laws. Accordingly, investors have obligations that include the protection of human rights and the environment.¹⁸⁴ The OECD Guiding Principles for Multinational Enterprises provides non-binding commitments to multinational enterprises in areas like human rights, labour, environment, and corporate social responsibility.¹⁸⁵ Moreover, there are standards that should be observed under UN Guiding Principles on Business and Human Rights to protect, respect and provide remedy for the violation of human rights.¹⁸⁶

7.1 Human rights

Under the Copenhagen Declaration on Social Development, states have expressed commitment to create economic, political, social, cultural and legal environment to achieve social development.¹⁸⁷ They are expected to provide

¹⁸² Ibid. The research conducted on Industrial parks revealed that the Industrial parks do not properly implement environmental laws in general, and do not meet the requirements of green industry in this respect. See Generally, Bekele Girma Ayele (2024), “Environmental management Policies, Practices and Compliance with National and International Standards in the Eastern Industrial park, Dukem Town, Ethiopia,”, available on: <https://doi.org/10.21203/rs.3.rs-3824568/v1> Accessed on: 28/06/2024

¹⁸³ Key Informant 12, *supra* note 181.

¹⁸⁴ Rudolf Dolzer (2022). “History, Sources, and Nature of International Investment Law”, in Ursula Kriebaum, Christoph Scheuer, and Rudolf Dolzer, (Eds.), *Principles of International Investment Law* (3rd Edition), at 34.

¹⁸⁵ Ibid.

¹⁸⁶ United Nations (2011), *Guiding Principles on Business and Human Rights*, (New York).

¹⁸⁷ Copenhagen Declaration on Social Development, A/CONF. 166/9 14 March 1995, Commitment 1.

a legal environment that ensures the full respect of human rights.¹⁸⁸ States have also expressed commitment to promote social integration by protecting all human rights,¹⁸⁹ and to promote full employment as a basic priority without discrimination between men and women.¹⁹⁰

In Ethiopia, investors are obliged to respect human rights while undertaking their activities. They should avoid infringing on the human rights of others and should consider human rights impacts of their activities.¹⁹¹ Investors must respect the human rights incorporated under the FDRE Constitution, international human rights instruments, and those enshrined under the International Labour Organization's Declaration on Fundamental Principles and Rights at Work.¹⁹²

7.2 Labour Rights

Investors should avoid the infringement of labour rights, as they are part of international human rights and rights under the international labour organization documents.¹⁹³ It is commendable that the investors in the industrial parks have created job opportunities in the parks. As an informant stated, the Hawassa Industrial Park has opened direct job opportunities for many people living around and in the Hawassa town.¹⁹⁴ Yet, there are concerns relating to the rights of workers.

The FDRE Constitution recognises the right of workers. Workers have the right to reasonably limited hours of work, periodic leaves with pay, and safe and healthy working environment.¹⁹⁵ The management of the industrial park should ensure that the rights of workers and working conditions in the park fulfil the standards required by the law. Working hours and other rights of workers should be implemented properly.¹⁹⁶ Grievance procedures should be in place.¹⁹⁷ The Labour Proclamation that imposes a duty to respect labour rights¹⁹⁸ as well as the relevant laws that protect the environment should be effectively implemented in industrial parks.¹⁹⁹

¹⁸⁸ Id, Commitment 1 (a).

¹⁸⁹ Id, Commitment 4.

¹⁹⁰ Id, Commitment 3.

¹⁹¹ UNGPs on Business and Human Rights, *supra* note 186, *Fundamental Principles*, 11.

¹⁹² *Ibid*.

¹⁹³ Id., *Fundamental Principles* 12.

¹⁹⁴ Interview with Informant.

¹⁹⁵ FDRE Constitution, *supra* note 84, Art. 2.

¹⁹⁶ World Bank Group; *supra* note 2, at 46.

¹⁹⁷ *Ibid*.

¹⁹⁸ Labour Proclamation No. 1156/2019, 2nd paragraph of the Preamble.

¹⁹⁹ Proclamation No. 886/2015, *supra* note 94, Art. 28(1).

Art. 42(1)(d) of the FDRE Constitution stipulates that women have a constitutional right to equal pay for equal work. Under Article 87(3) of the Labour Proclamation, women have special rights not to engage in a work that would affect their health, and they have the right to maternity leave (Art. 88). The Proclamation gives special attention to young persons who have attained 15 years of age but who have not yet attained the age of majority, i.e. 18 years of age. Thus, young persons have the right not to engage in work that would endanger their health or lives (Art. 88/3). Young workers shall not work beyond seven hours a day (Art. 90), and they may not work at night, part time and on holydays (Art. 91).

Article 92 of the Labour Proclamation requires the employer to ensure the safety and health of workers through appropriate working environment. The Proclamation also requires workers to cooperate with the employer to ensure the safety of the work environment (Art. 93). One of the major problems that are prevalent in industrial parks is *low wage*, and this is considered as a challenge in most industries in Ethiopia. This has a negative impact on the productivity of workers and has become a major challenge to retain workers.²⁰⁰

Although Regulations No. 417/2017 requires the Industrial park developer to build residential buildings for workers,²⁰¹ there is no residence for workers at Bole Lemi I Industrial Park. Thus, most workers reside around Goro, the nearby parts of Addis Ababa, in rented houses.²⁰² Moreover, industrial parks are required to build facilities such as medical service, sport centre, green area, and these facilities should be sufficiently accessible to persons with disability.²⁰³

7.3 Corporate Social Responsibility

International experience shows that the engagement of investors in local community activities can positively contribute to the goodwill and development of the industry. It would strengthen the trust and relationships between the community and the industries.²⁰⁴ Enterprises are recommended to undertake corporate social responsibility aimed at enhancing the economic,

²⁰⁰ Christian Johannes Meyer, *et al* (2021). *Wages and Compensation in Ethiopia's Industrial Parks: Evidence from a Firm Survey*, World Bank Group, at 104.

²⁰¹ Regulations No. 417/2017, *supra* note 107, Art. 11(2)b).

²⁰² Interview with informant No 4.

²⁰³ Regulations No. 417/2017, *supra* note 107, Art 11(2)(b).

²⁰⁴ World Bank Groups; *supra* note 2, at 47.

environmental and social development of the local society.²⁰⁵ Corporate Social Responsibility (CSR) and the human rights that must be ensured in business activities require state responsibility to protect rights, business enterprises to respect rights, and both the state and business enterprises to provide grievance mechanisms.²⁰⁶ They should at the same time ensure environmental sustainability because entitlement to clean and healthy environment is a constitutional right.

In Hawassa, the manufacturing industry is supporting nearby households with clean water. It avails machines and raw materials for the construction of infrastructure in Hawasa city.²⁰⁷ Hawassa Industrial Park had promised to build a fully equipped primary school. It has also promised to construct a junior hospital equipped with necessary testing instruments.²⁰⁸ The Industrial Park annually gives teaching materials for the children of the displaced persons.²⁰⁹ In spite these contributions, a research reveals that the Hawassa Industrial park, does not comply with the green standards relating to the social aspects of green industry.²¹⁰

Likewise, an informant noted that the Bole Lemi I Industrial Park has been undertaking social responsibilities such as providing education materials for children in addition to the economic benefits gained in the creation of jobs even if the magnitude of employment opportunity is not as expected.²¹¹ However, it is imperative to take note that corporate social responsibility should not be considered as charity,²¹² but an activity that should contribute

²⁰⁵ OECD (2023). *Guidelines for Multinational Enterprises on Responsible Business Conduct*, (OECD Publishing) at 10.

²⁰⁶ Yousuf Aftab (2014), “The Intersection of Law and Corporate Social Responsibility: Human Rights Strategy and Litigation Readiness for Extractive-Sector Companies, at 6; Amita Ramasastry (2015), “Corporate Social Responsibility Versus Business and Human Rights: Bridging the gap Between Responsibility and Accountability”, *J. Hum. Rts.* 237 at 239.

²⁰⁷ Berhe, *supra* note 111, at 96.

²⁰⁸ *Ibid.*

²⁰⁹ Interview conducted with informant No. 6, in Hawassa, on February 2, 2021.

²¹⁰ Negesa et al, *supra* note 221.

²¹¹ Interview with informant No. 4.

²¹² Some argue that corporate social responsibility should be taken as charity activity of the enterprises since enterprises are established to maximize benefits for the investors and the shareholders. Others argue that enterprises are required to undertake activities that will contribute to achieve sustainable development to the community. See Bereket Alemayehu Hagos (2022), “Legal Aspects of Corporate Social Responsibility in Ethiopia: A Sustainable Development Perspective” *The Journal of Sustainable Development Law and Policy*, Vol. 13:2; 1-27, DOI: 10.4314/jsdlp.v13i2.1, at 4.

to achieve sustainable development in Ethiopia in general. The Kombolcha Industrial park has undertaken similar activities in this regard²¹³ which indicates some efforts towards corporate social responsibility that might not contribute for green development. As Mahlet notes, there is knowledge gap on the part of the society in relation to climate change protection,²¹⁴ and green industrial development calls for holistic approaches that harmonize industrial performance, social wellbeing and environmental sustainability.

8. Conclusion

The discussion in this article has highlighted the legal norms that govern industrial development in the context of green economy. Although the economic activities in the industrial parks indicated in this article are encouraging, there are gaps in the proper implementation of environmental compliance standards. There is no environmental lawyer in the parks. The polluted water is not properly treated in the industrial parks, and is discharged to water bodies thereby causing adverse effects on the water. There are also gaps in the payment of fair wage. Moreover, there is no law to regulate e-waste, and this requires the enactment of law that expressly states the standards accompanied by the necessary institutional framework than ensures their implementation.

Industrial parks should comply with the industrial pollution control standards, and the Environmental Protection Authority should ensure compliance. This requires the assignment of an environmental lawyer in each industrial park (by the Environmental Protection Authority) in order to ensure the implementation of environmental laws. With regard to awareness enhancement, the Authority is required to give due attention to the dissemination of information regarding the economic, social and environmental compliance standards required by the law. These pursuits further envisage linkage that should be promoted by industrial parks and higher education institutions. ■

²¹³ Interview with Informant.

²¹⁴ Mahlet Eyasu Melkie (2022). *Green Industrialization in Ethiopia: Challenges and Potentials on the Road to a Net Zero Green Economy Case Study* at 23.

Cited References

- Adams, W. M. (2009). *Green Development: Environment and sustainability in a developing world*, (3rd Edition, Routledge, London).
- Aftab, Yousuf (2014). “The Intersection of Law and Corporate Social Responsibility: Human Rights Strategy and Litigation Readiness for Extractive-Sector Companies”
- Anzolin G & Lebdioui A (2021). “Three Dimensions of Green Industrial Policy in the Context of Climate Change and Sustainable Development”, *European Journal of Development Research*, Vo. 33(2).
- Arkebe Oqubay (2018). *The Structure and Performance of the Ethiopian Manufacturing Sector* (Working paper Series, no. 99, African Development Bank Group).
- Barrow, C.J. (2006). *Environmental Management for Sustainable Development* (Second Edition, Routledge, Taylor & FranCis Group).
- Bekele Girma Ayele (2024). “Environmental Management Policies, Practices and Compliance with National and International Standards in the Eastern Industrial park, Dukem Town, Ethiopia.” available on: <https://doi.org/10.21203/rs.3.rs-3824568/v1> Accessed on: 28/06/2024
- Bereket Alemayehu Hagos (2022). “Legal Aspects of Corporate Social Responsibility in Ethiopia: A Sustainable Development Perspective” *The Journal of Sustainable Development Law and Policy*, Vol. 13:2; 1-27, DOI: 10.4314/jsdlp.v13i2.1
- Billah, Masum (2022). *Agenda 2030 Green industrialization for sustainable development*, PID Feature.
- Correa, Fabiano De Andrade (2013). “The Role of Law in the Green Economy: Challenges and Opportunities for the Liberalization of Environmental Goods and Services” *The World Bank Legal Review*, Vol. 5, 147-161.
- Davide M, De Cian E. and Berbiguad A. (2018). *Energy for Adaptation: connecting the Paris Agreement with AHM*
- Dersolegn Yeneabate Mekonen (2020). “Comparing the Status and Recognition of the Right to Development under the RTD Declaration, African Charter on Human and People’s Rights and Ethiopian Constitution”, *International Journal of African and Sian Studies*, Vol. 19.
- Dolzer, Rudolf (2022). “History, Sources, and Nature of International Investment Law”, in Ursula Kriebaum, Christoph Scheuer, and Rudolf Dolzer, (Eds.), *Principles of International Investment Law* (3rd Edition).
- Dupuy P & Vinuales, JE. (2018). *International Environmental Law* (Second Edition, Cambridge University Press).
- Ermias Wodajo Azmach (2019). “Regulating Industrial Parks Development in Ethiopia: A Critical Analysis”, *Beijing Law Review*: <https://doi.org/10.4236/blr.2019.101003>
- Eskindir Atnafu Berhe (2018). *Socio-Economic Contribution of manufacturing Industrial Parks in Ethiopia: Prospects and Challenges from Stakeholder Perspectives* (MBA Thesis) December 2018
- Gehring, Markus W (2016). “Legal Transition to the Green Economy”, 12(2) *McGill Journal of Sustainable Development Law*.
- Gehring, Markus W. (2016). “Legal Transition to the Green Economy”, *JSDLP-RDPDD*, Vol. 12 Issue 2, 139.
- Global Development Solutions (2019). *Green Manufacturing Strategy for Ethiopia* (The Ministry of Industry).
-

- Grand, Mariana Conte and D'Elia, Vanesa, (2018). "Sustainable Development and "Green" Concepts", *Problemas Del DESARROLLO*, Volume 49, No. 192, available online at: <https://probdes.iiec.unam.mx/en/generales/docs/contract.p>
- Gunther, Oliver; Radermacher, Franz Josef & Reikert, Wolf Fritz (1995). *Environmental Monitoring: Models, methods, and Systems*, In: N.M. Avouris, B. Page (eds). *Environmental Informatics – Methodology and Applications of Environmental Information Processing*, Kluwer Academic, Dordrecht.
- International Bank for Reconstruction and Development (2012). *Inclusive Green Growth: The pathway to Sustainable Development* (Washington DC)
- International Chamber of Commerce in Irwansyah, Wardhani Hakim, and Ahsan Yunus, (2017). "Environmental audit as an instrument for environmental protection and management, *The business and management review*, Vol. 9, No, 2.
- Ivankiv, Iryna (2020). "Right to Sustainable Development as one of Human Rights of Humanity", *Studia Iuridica* LXXXII
- Jin Weibo *et al* (2023). "Green Development Policies for China's Manufacturing Industry: Characteristics, Evolution, and Challenges", *sustainability*, 15.
- Kumar A & Dwivedi A K (2023). "The Development of Environmental Law on Green Governance", *Journal of Law and Sustainable Development*, DOI: <https://doi.org/10.55908/sdgs.v11i6.1182>
- Leheza, Yuliaa and Surilova, Olena (2019). "Legal Regulation of the Application of Economic mechanisms for ensuring the Rational use of natural Resources: The Experience of Foreign Countries", *Baltic Journal of Economic Studies*, vol. 5, No.
- Li, Xingwei, Du, Jiangu, and Long, Hongyu (2019). "Green Development Behaviour and Performance of Industrial Enterprises based on Grounded Theory Study: Evidence from China", *Sustainability*.
- Luum Chalachew & Dagnachew Tesfaye (2022). Overview of Industrial Parks laws in Ethiopia;
- Mahlet Eyasu Melkie (2022). *Green Industrialization in Ethiopia: Challenges and Potentials on the Road to a Net Zero Green Economy Case Study*.
- Maidin A J *et al* (2012). "The Role of law in Fostering Sustainability in built Environment Industry: The Malaysian Experience", *Australian Journal of Basic and Applied Sciences*, 6(11): 90-96, at 90.
- Mora-Sanguinetti, Juan S. and Ateinsa-Maeso, Andres (2024). "Green Regulation": a Quantification of Regulations Related to Renewable Energies and Climate Change in Spain and France (Working Paper, No. 937).
- Morgera, Elisa and Savaresi, Annalisa (2013). "A Conceptual and Legal Perspective on the Green Economy", *RECIEL* 22 (1).
- Munitlak-Ivanovic O, Zubovic J & Mitic P (2017). "Relationship between Sustainable Development and Green economy- Emphasis on Green Finance Banking" *Economics of Agriculture* (64) 4 (1467-1482).
- Negesa, Doryn *et al* (2022). "Development of eco-Industrial parks in Ethiopia; the case of Hawassa Industrial park", *Journal of Industrial Ecology*, 26(1).
- Rakoid O.O & Bogoliubove V.M, (2020). *Environmental monitoring* (Study guide, Second Edition, Kyiv: NUBIP).
- Ramasastry, Amita (2015). "Corporate Social Responsibility Versus Business and Human Rights: Bridging the gap Between Responsibility and Accountability", *J. Hum. Rts.* 237 (2015).
-

Tesfaye Abate Abebe (2018). *Laws of Investment and Environmental Protection: The case of Large scale Agriculture in Ethiopia*, (LL.D thesis, University of South Africa (UNISA)).

Reports and Guidelines

International Institute for Sustainable Development (IISD), (2013). *Industrial policy for a Green Economy* (IISD Report).

OECD *Guidelines for Multinational Enterprises on Responsible Business Conduct* (OECD Publishing, 2023).

UNIDO, (May 2011). *Green Industry Policies for supporting Green Industry*, (United Nations Industrial Development Organization, Vienna,).

United Nations (2016). *Greening Africa's Industrialization* (Economic Report on Africa, Addis Ababa, Ethiopia).

United Nations Industrial Development Organization (2019). *International Guidelines for Industrial Parks*.

United Nations Industrial Development Organization, (2019). *International Guidelines for Industrial Parks* (Cross Disciplinary Team on Industrial Parks).

United Nations, (2013). *The Role of Legal Instruments to Support Green Low-Emission and Climate-Resilient Development: A Guide Book on Assessing, Selecting, and Implementing Legal Instruments*.

World Bank Group (2017). *An International Framework for Eco-Industrial Parks*

World Bank, (2022). *On the Path to Industrialization: A Review of Industrialization in Ethiopia* (Report, Washington DC).
