waste

MDPI

Review

Review of Togolese Policies and Institutional Framework for Industrial and Sustainable Waste Management

Essossinam Beguedou [1,*], Satyanarayana Narra [1,2], Komi Agboka [3], Damgou Mani Kongnine [4] and Ekua Afrakoma Armoo [1]

[1] Department of Waste and Resource Management, University of Rostock, 18059 Rostock, Germany; satyanarayana.narra@uni-rostock.de (S.N.); ekua.armoo2@uni-rostock.de (E.A.A.)
[2] German Biomass Research Centre gGmbH, 04347 Leipzig, Germany
[3] West African Service Center for Climate Change and Adaptive Land Use (WASCAL), University of Lomé, Lomé P.O. Box 1515, Togo; kagboka@univ-lome.tg
[4] Faculty of Science, Department of Physique, Centre d'Excellence Regional pour la maitrise de l'Electriciré (CERME), University of Lomé, Lomé P.O. Box 1515, Togo; kmani@univ-lome.tg
* Correspondence: essossinam.beguedou@uni-rostock.de

Abstract: Waste and resource management in Togo is expected to become more difficult due to increasing socioeconomic development, industrialization, and renewable energy investments. Although there are numerous elements that affect waste and resource management, legislation and policy frameworks are essential. In response to the growing demands for environmental protection, the legal provisions and regulatory frameworks of waste and resource management, as well as the legal implementation process, must be more and more comprehensive. Some actions have been taken in Togo to improve the incorporation of more sustainable industrial processes, which include restrictions and regulations on MSW generation, decentralization of MSW management, policies and incentive systems that promote waste reduction, reuse, and recycling, improvement of enforcement through investigation and treatment of violations, and encouragement of macro-socio-economies in the management of municipal solid waste. In spite of the presence of these policies, the sector is still plagued with numerous challenges, mostly in terms of implementation and the application of these policies to develop tailor made and locally feasible solutions. This research paper highlights relevant policies relating to MSW management in Togo as well as key international conventions and policies. It also discusses the contribution that "transition management" can make to such processes, emphasizes the role of governance for sustainable development, and it suggests solutions with a long-term transformation impact such as the incorporation of waste to energy systems into industrial processes. The paper further identifies some flaws and challenges with law implementation on MSW management and suggests solutions to improve the effectiveness of law implementation and the conditions and criteria for a safe and secure way to use waste-derived materials and fuels or by-products coming from society or other industries. These policy suggestions may also be applicable globally at an individual industry level to encourage the creation of more Green Industrial Companies (GICs).

Keywords: sustainability; green industrial companies (GICs); municipal solid waste recovery; co-processing waste to energy; municipal waste management; municipal solid waste mechanical biological management plant (MSW-MBMP)

check for updates

Citation: Beguedou, E.; Narra, S.; Agboka, K.; Kongnine, D.M.; Afrakoma Armoo, E. Review of Togolese Policies and Institutional Framework for Industrial and Sustainable Waste Management. *Waste* **2023**, *1*, 654–671. https://doi.org/10.3390/waste1030039

Received: 11 May 2023
Revised: 2 July 2023
Accepted: 4 July 2023
Published: 14 July 2023

Copyright: © 2023 by the authors. Licensee MDPI, Basel, Switzerland. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (https://creativecommons.org/licenses/by/4.0/).

1. Introduction

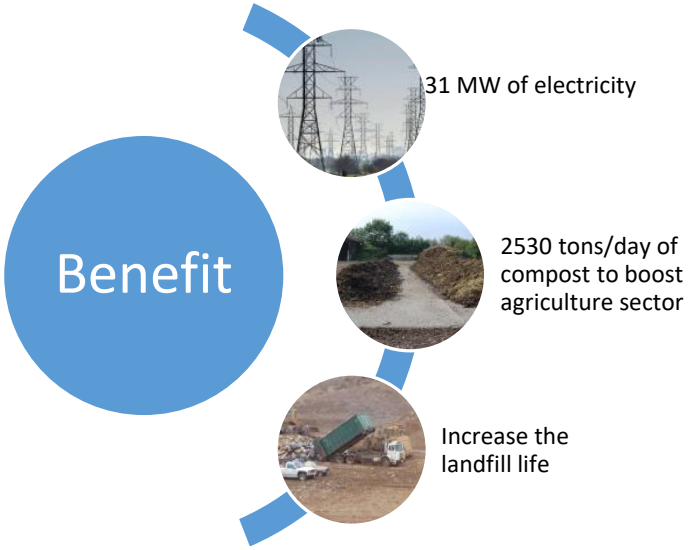
In sub-Saharan Africa, Togo is one of the smallest in terms of land size, but it is not exempted from the numerous challenges plaguing the continent in the management of its continuously increasing municipal solid waste (MSW) [1]. With a rapid growth rate, particularly in industrial output, services, and urbanization, Togo is in an economic development, industrialization, and modernization phase. The average annual Gross Domestic Product (GDP) of Togo was 5.1% in 2022. Along with this boom, there has been

a significant rise in urban population, particularly in Lomé, the capital city [2]. MSW collection and treatment is undoubtably under tremendous strain as generated volumes increase quickly, and its constituent parts become more complicated [3].

The ecological environment has been under strain because of the vast quantity of waste that has been released into nature because of domestic, commercial, and industrial operations (Figure 1a). The last two years have seen an increase in the quantity of MSW up to 1500 tons per day. Over 14 million tons of MSW was estimated to be generated worldwide in 2022. By 2030, it is anticipated that 54 million tons of solid waste would have been generated nationwide due to population growth [1].



(**a**)



(**b**)

Figure 1. (**a**): Uncontrolled landfill (Agoe uncontrolled landfill in 2019); (**b**): Potential benefits from sustainable management of MSW in Togo.

To attain sustainable development, the state as well as the various municipalities are guided by a vital principle: sustainable development achievement only goes hand in hand with respect for natural laws. Consequently, good management of MSW will bring the country economic, social, and environmental benefits [4]. Based on a recent study, Figure 1b represents potential benefits that could be attained through more effective and sustainable management of MSW in the country [5].

Ironically, despite the proven potential benefits, there is still about 2000 tons-per-day (tpd) of MSW that is collected but not well managed in accordance with standards, whereas a more significant quantity of MSW is not collected at all, causing negative impacts to soil and environment. Togo is also facing challenges with its social and environmental activities due to the rapid expansion of industry, leading to 2427.2 tons/day of waste [6].

In Greater Lomé, there are three methods for municipal waste collection: direct collection, pre-collection, and intermediate dump collection. An estimated 305.340 tons of municipal solid waste are produced year on average, of which 89.428 tons are collected and buried. A cleaner city will result from better waste management because less waste will need to be buried [4].

However, the state's budget for MSW management has not been able to keep up with the rising volume of solid waste, nor has the system of solid waste collection, transportation, treatment, and disposal.

The characterization shown in Figure 2 allowed researchers to determine that organic matter, paper and cardboard, textiles, plastics, and used tires form the most significant components of MSW produced in the country [2]. It has also been estimated that recycling plastic bottles and selling them in the city's port can increase daily income from EUR 15.5 to EUR 34.5, resulting in an increase in waste recovery [6,7], and creation of a circular economy [8].

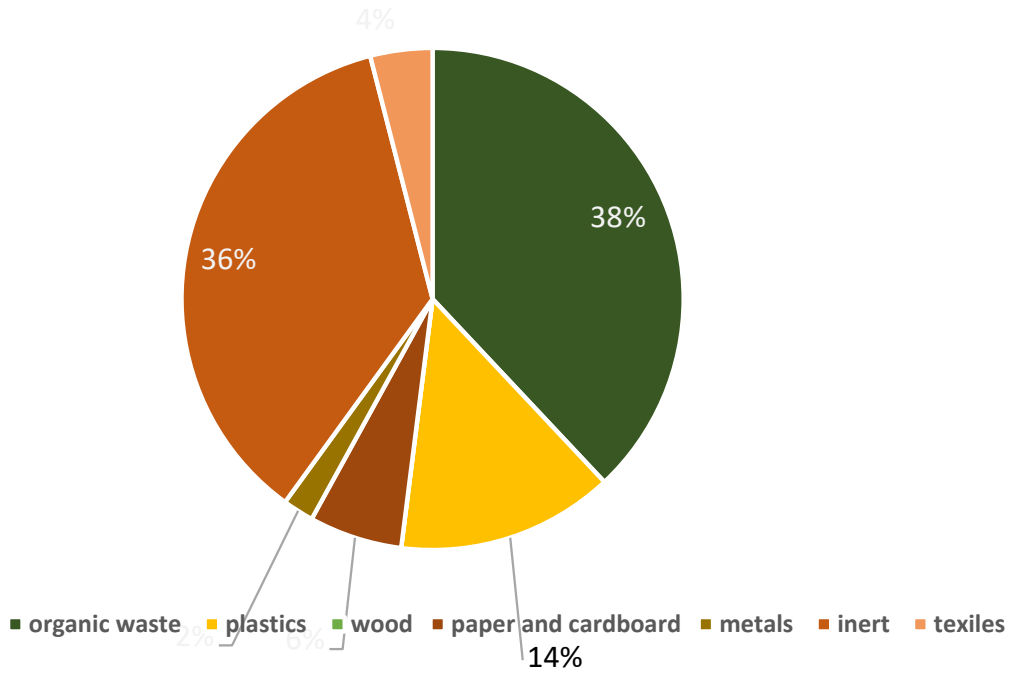


Figure 2. Ratios and characteristics of urban solid waste generated in Togo [2].

Togo committed to collecting, transporting, and treating solid waste in the Decision on Modifying the National Strategy issued by West African Service Center for Climate Change and Adaptive Land Use (WASCAL) in collaboration with University of Rostock (UR) on 2 November 2021. The purpose is the implementation of strategies that integrate MSW management by 2023 with a vision to 2030 [9]. It is projected that household waste will comprise 90% of common municipal solid waste, 80% of domestic waste in the capital, and 70% of household waste in rural areas by 2023. The WASCAL and UR released the strategy

draft document "National Sustainable Strategy (NSS) on integrated municipal solid waste management by 2023 with a Vision to 2030 and projection to 2050" on 3 July 2023. Taking into consideration the financial arrangements for investments and the method of capital recovery for waste management operations, action areas and infrastructure requirements are needed to meet the objectives. The most important factor is to enhance Togo's legal system and the efficiency of its MSW management laws [7,10,11].

1.1. An Overview Solid Waste Management Laws in Togo

The Togolese government's main interests are on the preservation of the environment and natural resources. As a result, several policies and strategies that support the efficient management of the environment and natural resources from the standpoint of sustainable development have been developed and adopted [12,13]. Therefore, governmental or private promoters must use these policies and plans as a reference when putting any development initiative into action. As a result, it has ratified several international conventions, treaties, or agreements and, since 1984, has created rules and regulations that are binding on any project that pertains to the environment and forest resources [12].

The government uses public policy as a management tool to carry out action plans. As a result, the government is crucial to the formulation of policies. Constitutions, rules, laws, legislative actions, principles, or directives are common types of public policies [14]. Policies in waste management include environmental protection legislation and rules for waste collection, treatment, and disposal. Table 1 summarizes some of these policies in Togo.

Table 1. Solid waste management law and regulation in Togo.

	Title Date	Date Issued	Issuing Agency	Content
Law	Law on Environmental Protection.	2009	National Assembly of Togo.	This law was created to address environmental protection activities, such as environmental rights, obligations, and responsibilities of agencies, organizations, families, and individuals. Environmental protection activities also include policies, measures, and resources to safeguard the environment.
Strategies	National strategy on integrated solid waste management to 2025, with a vision to 2050.	2022	Municipal Authorities.	The overall objective of this strategy was to build an integrated solid waste management system by 2024 that sorts solid waste at the source. Using relevant and cutting-edge technologies, waste collection, reuse, recycling, and treatment will be carefully controlled to minimize the amount of waste in landfills and lower environmental damage.
	Solid waste development strategy in urban areas and industrial zones in Togo to 2022.	2020	Municipal Authorities.	This strategy's goals are to collect, transport, and treat between 70% and 85% of the total solid waste by 2030.
National program	Solid waste treatment investment program for the period 2011–2020.	2021	Municipal Authorities.	The program's objective is to mobilize and concentrate resources toward solid waste treatment investments to increase the effectiveness of solid waste management, enhance environmental quality, protect public health, and contribute to the nation's sustainable development.
Decree	Decree on waste and scrap management.	1984	Ministry of Environment.	The management of waste, including hazardous waste, home waste, common industrial solid waste, liquid waste, wastewater, industrial emissions, and other specific wastes, is covered by this decree. Importing scrap metal is also covered by environmental protection.
Decision	Announce regulations on MSW collection, transportation, and treatment.	2009	The Government.	Street sweeping, waste collection, transportation, and treatment requirements, as well as rules for household solid waste, construction waste, and medical solid waste, are all included in this ruling.

Governments, NGOs, businesses, civil society organizations, and communities are all stakeholders in public policies. Environmental regulators, environmental NGOs, waste collection organizations, waste treatment businesses, and residential communities are also

important stakeholders of solid waste management [15]. The Togo system of governmental papers pertaining to household solid waste management is listed in Table 1.

The Government holds the Ministry of Natural Resources and Environment accountable for carrying out the duty of national management. The Ministry of Environment works along with other ministries, ministerial-level agencies, and organizations to implement environmental protection. The management of environmental protection in local communities is handled by the People's Committees of provinces and cities.

In 2018, Sani Yaya, Marc Vizy, and François Jacquier-Pélissier signed an agreement to give Lomé 9.2 billion CFA francs (14 million euros) as payment to enhance waste management in Togo's capital. The grant will be devoted to the technical component related to the environmental and social security of the landfill [8].

1.2. Green Industrial Companies

Industrial development in Togo has been increasing at a fast pace over the last decade. Although this has major positive impact for the country's economy and social improvement, such as job creation, several negative impacts have resulted at the expense of environmental sustainability [15]. It is important that industries incorporate strategies that reduce or mitigate negative environmental impact into their operations. Such strategies usually have economic implications on the companies.

Industries or industrial companies that incorporate certain green concepts into their activities to safeguard the environment either directly or indirectly can be described as Green Industrial Companies (GICs). Overall, the objective of governmental policy and regulatory frameworks is to stimulate more companies to transition into the status of GIC while incorporating some level of green strategy into their operations.

The development of GIC supply chain management will build on incorporating environmental considerations into conventional supply chain management. As corporations and nations become more sensitive to environmental and social challenges, GIC has emerged as a significant idea [16].

As a result, each nation must choose between expanding its economy and risking negative effects on society and the environment. Understandably, nations must debate and decide how to strike a balance between the possible advantages and disadvantages of expanding their economies. The nature of the productive matrix emerges as one of the most important aspects influencing the accomplishments of a GIC, among several other factors.

2. Research Methods

Togo has created several policy papers that must guide industrial operations and stimulate the evolution of conventional industries into Green Industries Companies (GICs). The authors synthesized policy information on political, legal, regulatory, and institutional documents governing the management of GICs using analytical and general methods and then evaluated how Togo's law on Green Industrial Companies' management is being put into practice. To establish a foundation for discussion of ideas that enhance the effectiveness of law implementation on green industrial businesses management in Togo, the paper also analyzed policies, laws, studies, articles, reports, and statistic reviews on green industrial company management [17,18].

The framework below represents the two categories of data sources based on the level of control of the GIC. The government-controlled frameworks are external factors to the GIC but have the capacity to influence the internal strategies and stimulate more industries to transition to GIC status. The project-controlled strategies, on the other hand, are internally controlled measures that companies choose in order to ensure the compliance to local environmental standards as well as international standards such as the International Standards Organisation (ISO) standards. One important quality of GICs is that labor health and safety is safeguarded, such as in the instance of reducing emission levels within the factory floor, while ensuring environmental compliance.

Apart from reviewing documents, investigations were carried out on industries complying with environmental standards as well as introducing innovative strategies to ensure such compliances (Figure 3).

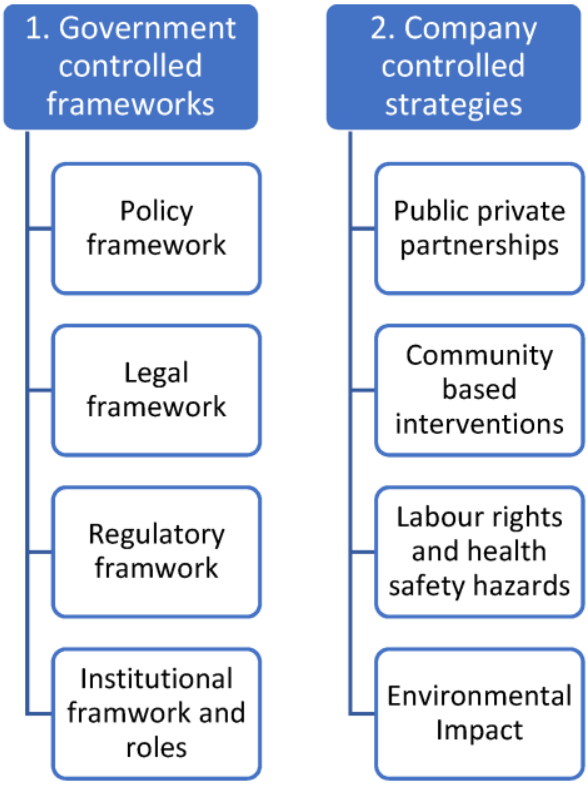


Figure 3. GIC data sourcing control level [19].

3. Results and Discussions

With a land area of 57,000 km^2 and a population of about 8 million (From World Bank Data on 2022), Togo is a country in West Africa. There are five distinct economic regions there. "Region des savanes", "regions de la kara", "regions centrale", "region des plateaux", and "region marine" are what they are called [8].

Togo has put a lot of work into establishing MSW management policies and legislation in recent years. The quantity of solid waste that needs to be buried is kept to a minimum by using cutting-edge, environmentally friendly technology to collect, reuse, recycle, and treat all sorts of created waste. However, MSW management still has issues of its own, polluting the environment in several locations. Even many locations have major pollution problems.

There are various factors that contribute to such circumstances. One of them is the fact that the present legislation on MSW management is insufficient, lacking, and far from reflecting the real circumstances. The problems and barriers associated with Togo's MSW management laws have increasingly come to light. For the effectiveness of MSW management in Togo, there are several shortcomings in the current state of legislation execution regarding solid waste management, which are:

Decentralization in MSW management: Each form of waste (hazardous waste; household waste; common industrial solid waste; common industrial solid waste; and special waste, such as agricultural wastes and biomedical wastes) and waste minimization are managed in accordance with the legal requirements. There are several ministries dealing with and resolving MSW management problems, which prevent a cohesive and adequate management system from being in place. To address the issues, constraints, and challenges associated with the State's management of municipal solid waste [20].

Central to local levels must execute synchronously the unified state management of solid waste. The Ministry of Natural Resources, Territory Administration, Economy, and

Environment is the primary government entity in charge of managing solid waste at the central level. The Department of Natural Resources and Environment is the primary local government body tasked with managing solid waste on behalf of the province People's Committee. To increase the efficacy and efficiency of state management, it is important to change the legislative documents relating to the duties and responsibilities of ministries, branches, and municipalities regarding the management of municipal solid waste [21].

Controlling and limiting the sources of MSW should be prioritized. The major features of waste management must be the avoidance and limitation of negative environmental effects. In other words, waste creation must normally be prevented and limited at the source of the waste. First and foremost, restrictions on waste production must be put in place. If that is not practicable, steps must be performed to lessen waste formation. It must be handled to generate waste that is required. Recycling is given high importance when it comes to waste treatment. The removal of harmful waste is the next remedy. Destruction will be the last option only when each of these alternatives has been fully applied [22].

In Togo, there are more and more sources of municipal solid waste, and, as a result, they have a greater and greater influence on the environment. Some sources produce a sizable quantity of MSW overall. However, there are also smaller sources of waste that do include hazardous material. Due to inadequate resources, controlling and limiting pollution sources has proven to be quite challenging. Deciding for the management and treatment of MSW sources is therefore important. Another distinct requirement is to establish the priority rankings for each step for each form of solid waste. Priority should be given to reducing waste from sources that produce a lot of MSW, which affects many environmental factors, such as highly polluting industrial production of cement and thermoelectricity in the short term due to limited resources [23].

To reduce and finally cease using non-biodegradable plastic bags, it is important to make an application legislative rule, comprehensive incentive programs and procedures, promote activities of reducing, reusing, and recycling municipal solid waste, and establish suitable roadmaps. In addition to developing rules on the management and use of recycled goods and materials for various forms of recycling production from municipal solid waste, it is crucial to complete the advice on valuation techniques for the collection, transportation, and disposal of daily-life solid waste [24].

Examining, handling, and conducting inspections of infractions around MSW management: The State management agencies on MSW and emission owner's terms and articles on how to treat waste at its source during collection, transportation, and disposal are just a few of the details that the legal system on solid waste management must specify in detail to successfully attract the participation of the public sector. Enforcement of pertinent rules requires that the government monitor waste management at various stages, from the time of waste creation to the ultimate disposal, and sanction offenders [25].

The monitoring, analysis, and punishment of administrative transgressions in environmental protection, however, still has certain shortcomings. The legal definitions of administrative offense penalties do not accurately reflect the reality. When offenders commit violations repeatedly or fail to swiftly fix the harm they create, they are just considering the individual violations and not the accumulation of fine levels. The ropes of discipline are, therefore, not tight. All subjects who violate the law are subject to punishment, but there are no provisions addressing the underlying causes of the infractions, therefore enforcing that the sanctions are still vulnerable to disagreement from those who broke the law in the first place. As there are not enough people to do the inspection and assessment, it still has a lot of constraints. Due to administrative requirements that must be notified in advance, only performing inspections during office hours, environmental law infractions are becoming more complicated and challenging to discover. As a result, there is a low level of effectiveness in the examination of legal compliance and prompt resolution of infractions in all enterprises. Therefore, to reflect the current state of waste management, it is necessary to modify the legislative rules on inspection, examination, and punishments around environmental protection [26].

Overview of Waste and Energy Policies, Legal, Institutional, and Regulatory Frameworks in Togo.

3.1. Policies for the Management of Green Industrial Companies in Togo

Togo has created several policy papers that must guide industrial operations and stimulate the evolution of conventional industries into Green Industries Companies (GICs). All the policy documents under evaluation offer comprehensive policy frameworks for incorporating environmental, sanitary, and energy concerns into Togo's development plans and initiatives. For instance, the Togo Environmental Sanitation Policy encourages resource recovery strategies, maximizing synergies at all levels of collection, recycling, treatment, and disposal. The Togo National Energy Policy also offers a framework for the effective management of the country's energy resources with the goal of fostering an environment that would encourage increasing investment in the energy sector. The following themes are generally the focus of the policies (Table 2).

Table 2. Waste and energy policies/international laws in Togo.

Policy Laws	Policy Objective on Waste and Energy
The Strategic Framework of the Sustainable Development Goals (SDGs) [27,28]	The SDGs have identified 15 priority objectives to address poverty, hunger, access to energy services, economic growth, employment, building resilient infrastructure, and climate change.
ECOWAS Energy Efficiency Policy (ESCP) [29]	The policy aims to improve ECOWAS' energy efficiency to international standards by 2020 through five regional initiatives.
ECOWAS Environmental Policy [30]	The ECOWAS Environmental Policy seeks to improve the living conditions of people in sub-regional areas.
Togo's national environmental policy [31]	Togo's national environmental policy aims to promote rational management of natural resources and the environment, with four main orientations. (1) De-concentration of industrial units, (2) legislation, (3) environmental assessment, and (4) low-impact mining.
Togo's National Sanitation and Hygiene Policy	Strengthen national capacities, develop local expertise, ensure full coverage of sanitation facilities, and foster a culture of hygiene and sanitation.
National Spatial Planning Policy (PONAT) [32]	Improve national governance of environmental management, bring coherence to policies, plans, and policies, and promote an environmental ethic through public awareness.
TOGO's action plan on renewable energy [33]	Energy efficiency and sustainable energy for all focuses on three priorities. Increase energy supply, strengthen security, reduce inequalities in access to modern energy services.

3.1.1. Legal Framework for the Management of Green Industrial Companies in Togo

As illustrated in Table 3, the international legal framework (ILF) for environmental protection includes several accords that Togo has ratified. Togo has a robust legislative and regulatory structure in place to manage the country's natural resources and the environment. The National Strategy for the implementation of the United Nations Framework Convention on Climate Change prioritizes improving energy efficiency and encouraging fewer polluting methods in order to reduce ambiguities surrounding activity data and GHG emission variables [34].

Table 3. Waste management, international and national legal framework in Togo.

Legal Framework	Legal Framework Objective on Waste and Energy
International Legal Framework (ILF) in Togo	
United Nations Framework Convention on Climate Change (UNFCCC) [34]	Stabilize greenhouse gas concentrations in the atmosphere to prevent any disturbance of the climate and stabilize GHG concentrations in the atmosphere to prevent dangerous anthropogenic disturbance of the climate system.

Table 3. *Cont.*

Legal Framework	Legal Framework Objective on Waste and Energy
The Kyoto Protocol [35]	Establishes a "clean" development mechanism to help developing countries and Annex I Parties meet their emission reduction and limitation commitments
The Paris Agreement [36]	Aims to contain global warming below 2 °C and to achieve carbon neutrality by reducing GHG emissions to offset them by carbon sinks in the second half of the century. The Paris Agreement emphasizes the distinction between developed and developing countries, setting a $100 billion ceiling for climate assistance by 2025.
International Labor Organization Convention 176 on Mining [36]	International Labor Organization Convention 176 on Mining prohibits all forms of child labor in mines and advocates for immediate action to eliminate the worst forms of child labor. Types of work must be determined by national legislation or competent authority.
The Convention on the Promotional Framework for Safety and Health at Work [37]	Members must take active measures to ensure a safe and healthy working environment.
National Legal Framework (NLF)	
The Togolese Constitution of the 4th Republic of 1992 [38]	Recognizes the citizens' right to a healthy environment and imposes special obligations on the State to protect it. It also considers the environmental rights and duties set out in the 1945 Universal Declaration of Human Rights and international instruments ratified by Togo.
Environmental Framework Act 2008-005 of 30 May 2008 [39]	Preserve and sustainably manage the environment, guarantee an ecologically healthy living environment, create conditions for rational and sustainable management of natural resources, and improve the living conditions of the population.
Law No. 2018 correcting Law No. 2007-011 of 13 March 2007 on decentralization and local freedoms [40]	Confers important powers on local authorities to manage the environment and natural resources, including sanitation and environmental health measures.
Law No. 2008-009 of 19 June 2008 on the Forest Code [41,42].	Defines and harmonizes the rules for the management of forest resources for a balance of ecosystems and the sustainability of forest heritage. It also prohibits any act that harms or disturbs wildlife or habitats, along with hunting, fires, and bushfires.
The Planning Framework Law [43]	Focuses on unity, national solidarity, economic and social cohesion, complementarity, sustainability of development, participation of all actors, subsidiarity, and regional integration.
Law No.2009-007 of 15 May 2009 on the public health code [44]	Protects the environment, including water and air pollution
Regulatory Order No 2011-041/PR [45]	Regulatory Order No 2011-041/PR outlines steps for carrying out Togo's environmental and social impact assessment. Audit must be conducted every four years following environmental compliance certificate.
Regulatory Order No 2012-043/PR [46]	Regulatory Order No 2012-043/PR revises tables of occupational diseases, defining them as an ailment deriving from working circumstances.
Inter-ministerial Agreement No.004/2011/MTESS/MS [47]	Establishes an occupational safety and health service to identify and assess risks, monitor risk factors, and draw up statistics.
Inter-ministerial Agreement No.005/2011/MTESS/MS	Employers must submit their employees to medical examinations for employment and periodic examinations at least once a year, with employer responsibility for costs.
Inter-ministerial Agreement No.009/2011/MTESS/DGTLS of 26 May 2011	The Technical Advisory Committee on Safety and Health at Work is responsible for identifying risks, ensuring compliance, carrying out investigations, and improving health and safety conditions.
Inter-ministerial Agreement No.2000-090/PR	Application for operating authorization must be sent to Regulatory Authority three months before commissioning.

3.1.2. Regulatory Framework for Management of Green Industrial Companies in Togo

The World Health Organization (WHO)'s recommendations on pollution and nuisances and some International Organization for Standardization (ISO) standards are gen-

erally accepted standards for process improvements. Some important standards include ISO 14000:1996, which provides guidelines on Qualification Criteria for Environmental Auditors, whereas ISO 14012:1996 provides guidelines for the qualification criteria of environmental auditors and audit managers. It applies to both internal and external auditors. Criteria for the selection and composition of audit teams are not included; information on these topics is given in ISO 14011.

ISO 14012:1996 has been developed in parallel with the International Standards on General Principles of Environmental and Social Impact Assessment (ISO 14010) and on Guidelines for Specific Auditing of Environmental Management Systems (ISO 14011).

ISO 14001:2015/Environmental Management System: The ISO 14001:2015 specifies the requirements for an environmental management system that an organization can use to improve its environmental performance. It is intended for use by organizations wishing to manage their environmental responsibilities in a systematic manner that contributes to the environmental pillar of sustainable development.

The standard helps an organization to achieve the intended results of its environmental management system, which are added value to the environment, to the organization itself, and to stakeholders. In line with the organization's environmental policy, the expected results include, among other factors, improving environmental performance; meeting compliance obligations; and achieving environmental objectives.

ISO 14001:2015 applies to the environmental aspects of the activities, products, and services that the organization identifies and has the means to either control or influence from a life cycle perspective. The standard can be used in whole or in part to systematically improve environmental management. However, declarations of conformity are not acceptable unless all its requirements are incorporated into the organization's environmental management system and are met without exclusion.

WHO Air Quality Guidelines for Particulate Matter, Ozone, Nitrogen Dioxide, and Sulphur Dioxide: The air quality guidelines were published by the WHO in 1987 and revised in 1997. The purpose of the Guidelines is to provide a scientific basis for reflection to protect public health from the harmful effects of air pollutants and to eliminate or minimize pollutants known or suspected to be harmful to human health and well-being, being man-made.

WHO guidance values are based on epidemiological and toxicological data and are long-term objectives. They are indicative and therefore have no regulatory scope. Guide values are for individual compounds only. There are no data on possible synergies between pollutants. Ideally, the guidelines recommend guideline values representing concentrations of pollutants in the air that do not pose a danger to the human population.

In the case of non-cancerous substances, the WHO Directives specify guide values for air quality, i.e., the concentration below which a substance is not expected to have any adverse effect on health; the adverse effect considered; the concentration at which this effect is observed; and the range of ambient concentrations that established the exposure-response ratios and the associated uncertainty factors. For carcinogens, there is no threshold below which the component is not a health risk. To determine an acceptable risk, the guidelines are:

For these compounds: Expressed in terms of the additional cancer risk associated with the presence of these substances in the air.

Noise Standards: The World Health Organization (WHO) and the Organization for Coordination and Economic Development (OECD) have collected data and developed their own studies on the effects of exposure to environmental noise. Based on these assessments, recommended values for different periods and situations have been defined.

World Health Organization/Organization for Coordination and Economic Development Guidelines: The World Health Organization (WHO 1999)'s Guidelines on Noise in Communities have issued the following generic directive on the occurrences of adverse health effects from noise.

- To protect most people from high daytime noise, the sound intensity levels on balconies, terraces, and outdoor living areas should not exceed 55 dB LAeq for continuous background noise.
- To protect many people from moderate daytime nuisances, the outdoor sound intensity level should not exceed 50 dB LAeq.
- At night, the sound intensity levels on the exterior façades of living spaces should not exceed 45 dB LAeq and 60 dB LAMax, so people can sleep with the windows open. These values were obtained assuming that the reduction in noise from outside to inside with partially open windows is 15 dB.

3.1.3. Institutional Framework for Management of Green Industrial Companies in Togo

Green Industrial Companies (GICs) will need to work with a wide range of institutions, whose list is included in Table 4, to conduct the project sustainably while adhering to legal and regulatory requirements [48]:

Table 4. Togolese Institutional framework for GIC project application.

N°	Institutions	Role in the Management of GIC
1	Ministry of Environment and Forest Resources	Implementation of the national environmental policy is ensured by the ministry in charge of the environment.
2	Ministry of Energy and Mines	Implementation of State policy in the area of mines, hydrocarbons, and energy and ensures its follow-up with the collaboration of other ministries and institutions concerned.
3	Ministry of Road, Rail and Air Transport	Coordinates the interventions of the State and the various actors in the construction of public works and oversees the management of the maintenance, rehabilitationm and promotion of road, airport, rail, port, and rural track infrastructures. They are responsible for the public engineering and architecture activities entrusted to his services.
4	Ministry of Security and Civil Protection	Implements government policies in matters of protection of persons and property, civil security, security of institutions, and maintenance of public order and peace.
5	Ministry of Public Service, Labor and Social Dialogue	Prepares labor relations legislations and regulations and oversees their applications. Ensures the quality of relations between workers and employers and promotes social dialogue. Defines the strategy for combating unemployment, underemployment, child labor, and illegal work. Promotes fundamental principles and rights at work, labor migration, and conflict management in the workplace Implements a policy for the development of social cover for workers. Monitors the proper functioning of social security and health insurance bodies.
6	Ministry of Territorial Administration, Decentralization and Territorial Development	Develops implements, conducts and executes government policy in the areas of territorial administration, the conduct of the decentralization process, and the management of local authorities. Ensures respect for the distribution of powers between the State and the local authorities and works to safeguard the general interest and legality.
7	Ministry of Health, Public Hygiene and Universal Access to Care	Develops programs to improve health coverage as well as strategies for the prevention and control of major endemics. Ensures the permanence and continuity of the functioning of health services and ensures easy and equitable access to health care.
8	Ministry of Trade, Industry and Local Consumption	
9	ANGE-(National Environmental Management Agency)	

In MSW management, socialist policies must be encouraged [49]. The State is very concerned with socialist policies in environmental protection in general. The structure for

the law promoting socialist policies is still being completed. Some booming industries include waste transportation and collection, particularly hazardous waste, and waste treatment facilities. Figure 3 presents an illustration of how a typical GIC operates within the country. However, to coordinate the socialization, Togo needs a comprehensive policy and legal framework for the growth of environmental services as well as a network of environmental service firms.

Company-controlled Strategies to improve the development of Green Industrial Companies.

Below are examples of companies that have led the way in incorporating certain green concepts into their operations (Table 5).

Table 5. Togolese companies that led the way in incorporating green concepts.

Company	Green Strategy
1. Scantogo	Substitution of fossil fuels (coal) with waste alternative fuel biomass from local farms
2. WACEM	Substitution of fossil fuels (coal) with waste alternative fuel from local waste oil
3. NIOTO	Substitution of fossil fuels (Diesel) with waste alternative fuel from local farmer waste

1. Public Private Partnership

To improve public–private collaboration and mobilize socialized resources for environmental preservation, methods and policies must be reviewed and added [50]. Some private companies have partnered with public institutions to ensure compliance with environmental standards.

2. Community-based strategies

It is important to support community-based waste collection and sorting operations. The local community should be given a bigger voice in local MSW management policy and be given more responsibility as a conductor, inspector, and supervisor of local solid waste management [25].

This country can develop a specific program of zero waste in cities, eliminating uncontrolled landfills, with the use of circular economy indicators, as shown in Figure 4. Additionally, this calls for increasing environmental awareness among Lomé's culture and the academic community. As shown in Figures 4 and 5, the cost of investment in infrastructure (infra-invest-cost) for total investment technology at municipal solid waste plants. The investment focused on the treatment of bio-digesting, the refused derived fuel (RDF), and the municipal waste collection facility. It also has the yearly operating cost (OPEX). The investment recovery time is about 9 years.

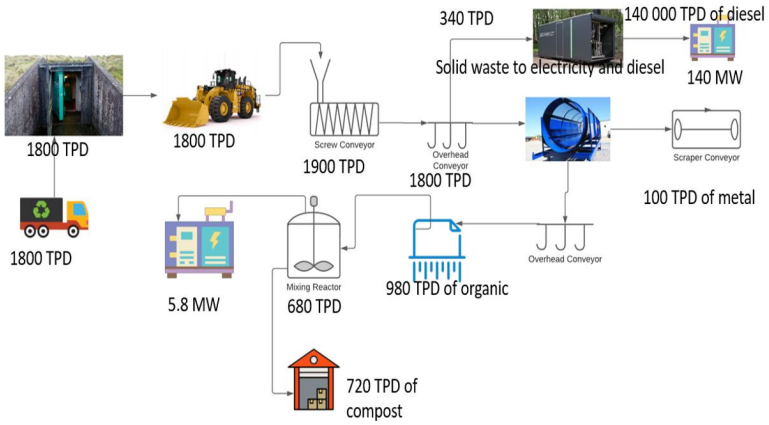


Figure 4. MSW Mechanical biological management plant.

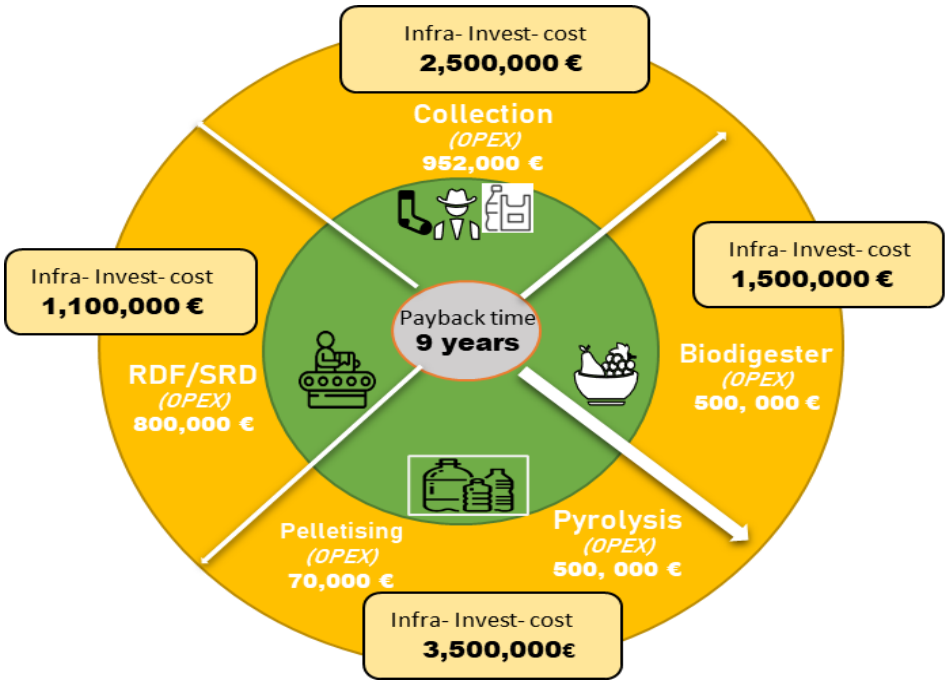


Figure 5. Municipal solid waste mechanical biological plant costs [51].

In this regard, it should be underlined that additional market and business research is required for the proper implementation of a recovery waste management plan. Future research lines could be created as a result to consider the needs of the market, logistics, and other business-related factors [52].

Green Industrial Companies will have to consider these different development Goals on SDGs, Goal 9 and 13 in particular, to promote sustained, shared, and sustainable economic growth, full productive employment, decent employment for all, and, by putting in place management mechanisms, to help to ensure Togo's resilience and adaptation to climate hazards [53].

Green Industrial Companies (GICs) will consider the objectives of this policy (ESCP) by working to create an enabling environment for energy efficiency in the implementation of all phases of the activities; Green Industrial Companies must implement their projects in accordance with the objectives linked to each strategic axis of the ECOWAS common policy, which is intended as a framework for "West Africa in a frontier-free space where citizens can benefit from opportunities and sustainably exploit the region's enormous resources." Green Industrial Companies will ensure compliance with this national policy regarding compliance with the laws in force, the promotion of clean technologies, the implementation of low-impact mining practices, and the restoration of mine sites [54].

With the renewable energy option, green industry businesses can enable Togo to reduce its GHG emissions in accordance with the main objective of the Kyoto Protocol.

Togo will be able to adhere to the Paris Agreement's goal of keeping global warming "far below 1.5 °C", if feasible, thanks to this waste recovery operation involving various industry companies, encouraging methods for reducing all types of emissions and a strategy for boosting carbon removal sinks [51].

3. Business models in waste management and creation of circular economy

By examining the framework's conditions and its effects, businesses and organizational models can be developed for the implementation of the management strategies, technologies, and product retailings mentioned above, creating business plans for the facility that handles municipal solid waste. One business case should be created from the business cases for the entire plant.

Create a decision-supporting tool to help with the model's replication in various national contexts. Create a spatial representation of hotspots to assist with decision-making for replication.

Green industry businesses must ensure the fulfilment of the obligations arising from this agreement by taking all necessary measures to carry out recruitment in compliance with legal and regulatory provisions [52].

4. For labor rights, health and safety standards for the health, safety, and well-being of the workforce, and to support the long-term economic growth of society, it is crucial to provide a workplace that adheres to hygienic and sanitation standards [55].

Therefore, green industrial enterprises must take the essential steps to give the orientations of this in its different operations actual thought and must adhere to this vision of PONAT by carrying out these activities in accordance with the resulting guidelines and in compliance with the established strategic axes. They also have to consider its different orientations both to minimize the potential impacts inherent in climate change and to ensure optimal, environmentally sustainable management of its facilities and also achieve the SDG goals, developing a Circular Economy (CE) and Industry 4.0 (I4.0) [51].

Green industry businesses must operate in accordance with the goals of UNFCCC agreement by paying particular attention to the principles to safeguard humankind and their environments from the consequences of climate change [50].

In accordance with Article 2: the International Labor Organization (ILO)'s instruments relevant to the promotional framework for occupational safety and health. These provisions, transposed into Togo's internal legal system via the Labor Code and the Social Security Code, must be respected by green industry businesses. A good recruitment program and good management of labor could provide a positive influence to increasing employee commitment, productivity, and the quality of work, including performance [49].

Green industrial company must take all necessary measures to ensure that workers operate in the optimal safety conditions, must ensure the protection of the health of the workers, and not throw into the nature any waste likely to harm the health of the population. By abiding by its commitments under this order, Green Industrial Companies (GICs) must place a high priority on the health and safety of its employees. They will need ensure the implementation of this decree to guarantee the well-being of their workers.

5. Ensuring standards and reducing negative environmental impact

When working with local authorities on these environmental management efforts, especially in relation to waste and resources management and local development projects, the green industry firms will need to take these texts or laws into consideration.

Green Industrial Companies will need to take the required steps to guarantee compliance with the forest code's requirements and give a compensating replanting program top priority in its sphere of control to conserve forests that are a real source of absorbing greenhouse emissions, and they will also have to adhere to the vision of this law by carrying out these activities in compliance with the resulting obligations and in compliance with the established principles [24].

An environmental management strategy based on ISO 14001 has already been adopted by Green Industrial Companies (GICs). This is taken into consideration in the environmental and social impact assessment, and both the auditors and those in charge of carrying out the company's ESMP will make sure that they adhere to the standards outlined in this standard to the greatest extent feasible.

Like other ISO standards, Green Industrial Companies (GICs) have adopted voluntary methods to comply with the ISO 14001 standard. The companies must successfully finish their certification audits to do so. A firm must thus take the required steps to carry out its operations in line with the standard's advocacy of continual improvement [52].

Based on these guidelines, Green Industrial Companies (GICs) will have to take the necessary measures to limit all sources of air pollution within the framework of this research review of the laws. Green Industrial Companies will be ensuring that the fundamental

principles and rights recognized by the constitution are respected in all these processes. This investigation was started in response to these requirements stated in the environmental framework law.

Companies in the green industry vision will thus need to take the required steps to close the gaps found in this research review to promote sustainable development and ongoing process improvement [47].

4. Conclusions

Making a country green is crucial for ensuring human survival, considering the current climate crisis. A nation's entire productive matrix and related productive processes must therefore be sustainable to accomplish this goal. This needs to be performed while considering relevant factors and problems, such as sustainability, etc.

The research findings suggest that solid waste management is urgently needed in Togo due to the country's growing MSW production. New rules have been implemented, but there is still a lack of innovative laws and confusion over economic instruments.

The Togolese government will use this study as a reference to draft legislative measures modeled after those implemented in Europe, China, and other African nations. This waste management strategy can help meet Togo's social responsibility programs' objectives of bettering health and environmental conditions, recommending research projects, and raising environmental awareness among the Togolese.

Increasing the development of Green Industrial Companies (GICs) and encouraging the transition of the current companies into GIC statuses will reduce the current negative environmental impacts in the country.

The paper presents several existing company-controlled strategies, which have been used locally by some companies, which, when adopted by others, will improve the sustainability of such industries. Furthermore, the paper encourages the adoption of new and innovative case-specific strategies that will enhance the sustainability of industrial operations in Togo and help the government to attain its target.

Author Contributions: Conceptualization: E.B., S.N., K.A., D.M.K. and E.A.A.; Methodology: E.B., S.N., K.A., D.M.K. and E.A.A.; Validation: E.B., S.N., K.A., D.M.K. and E.A.A.; Formal analysis: E.B. and S.N.; Investigation: E.B. and S.N.; Resources: E.B. and S.N.; Data Curation: E.B.; Writing Original Draft Preparation: E.B.; Writing Review and Editing: E.B., S.N., K.A. and E.A.A.; Visualization: S.N., K.A. and E.A.A.; Supervision: S.N., K.A. and D.M.K.; Project Administration: S.N. All authors have read and agreed to the published version of the manuscript.

Funding: This research received no external funding.

Institutional Review Board Statement: Not applicable.

Informed Consent Statement: Not applicable.

Data Availability Statement: Not applicable.

Conflicts of Interest: The authors declare no conflict of interest.

References

1. Matsunaga, K.O.; Themelis, N.J. Effects of affluence and population density on waste generation and disposal of municipal solid wastes. *Earth Eng. Cent. Rep.* 2002, 1–28. Available online: https://www.researchgate.net/publication/228908198_Effects_of_affluence_and_population_density_on_waste_generation_and_disposal_of_municipal_solid_wastes (accessed on 2 September 2002).
2. World Bank Data. GDP Growth (Annual %)—Togo—World Bank Data. 8 December 2022. [Enligne]. Available online: https://data.worldbank.org/indicator/NY.GDP.MKTP.KD.ZG (accessed on 8 December 2022).
3. Bigou-Lare, N.; Pigé, B. Chapitre 18. La gestion des ordures ménagères à Lomé. *Dyn. Norm.* 2015, 219–228. Available online: https://www.cairn.info/dynamique-normative{-}{-}9782847698251-page-219.htm (accessed on 3 October 2019).
4. Ayodele, T.R.; Alao, M.A.; Ogunjuyigbe, A.S.O. Recyclable resources from municipal solid waste: Assessment of its energy, economic and environmental benefits in Nigeria. *Resour. Conserv. Recycl.* **2018**, *134*, 165–173. [CrossRef]

5. Salguero-Puerta, L.; Leyva-Díaz, J.C.; Cortés-García, F.J.; Molina-Moreno, V. Sustainability indicators concerning waste management for implementation of the circular economy model on the University of Lome (Togo) Campus. *Int. J. Environ. Res. Public Health* **2019**, *16*, 2234. [CrossRef]
6. Bitasse, E.O.; Moutoré, Y.; Dansoip, G. Stakeholders' perceptions and strategies to climate change resilience in Kara and Dapaong, Togo. In *Natural Resources, Socio-Ecological Sensitivity and Climate Change in the Volta-Oti Basin*; West Africa CRC Press: Boca Raton, FL, USA, 2020; pp. 85–96.
7. Azianu, K.A.; Sangli, G. Challenges of health care waste management in the health district n° 5 of Lomé Commune in Togo. *HAL* **2021**, *15*, 90–105.
8. Tran, M.D.; Pushkareva, L. Implementation of the law on solid waste management in Vietnam today: Necessity, problem and solutions. *E3S Web Conf.* **2020**, *164*, 11013. [CrossRef]
9. Gnaro, T.; Ali, A.; Adom, A.; Abiassi, E.S.; Degbey, C.; Douti, Y.; Messan, D.K.; Sopoh, G.E.; Ekouevi, D.K. Assessing Biomedical Solid and Liquid Waste Management in University Hospital Centers (CHU) in Togo, 2021. *Open J. Epidemiol.* **2022**, *12*, 401–420. [CrossRef]
10. Ouattara, J.M.P.; Zahui, F.M.; Messou, A.; Loes, L.M.E.; Coulibaly, L. Assessment of Solid Waste Management Practices in Public Universities in Developing Countries: Case of NANGUI ABROGOUA University (Abidjan, Côte d'Ivoire). *Int. J. Waste Resour.* **2022**, *12*, 451.
11. Amato, C.; Togo, C. Improper Municipal Solid Waste Disposal and The Environment in Urban Zimbabwe: A Case of Masvingo City. *Ethiop. J. Environ. Stud. Manag.* **2021**, *14*, 554–564.
12. Bilgaev, A.; Dong, S.; Li, F.; Cheng, H.; Sadykova, E.; Mikheeva, A. Assessment of the current eco-socio-economic situation of the baikal region (Russia) from the perspective of the Green economy development. *Sustainability* **2020**, *12*, 3767. [CrossRef]
13. Sims, N.C.; England, J.R.; Newnham, G.J.; Alexander, S.; Green, C.; Minelli, S.; Held, A. Developing good practice guidance for estimating land degradation in the context of the United Nations Sustainable Development Goals. *Environ. Sci. Policy* **2019**, *92*, 349–355. [CrossRef]
14. Cai, Y.J.; Choi, T.M.A. United Nations' Sustainable Development Goals perspective for sustainable textile and apparel supply chain management. *Transp. Res. Part E Logist. Transp. Rev.* **2020**, *141*, 102010. [CrossRef]
15. Europeen Ttransition. Officer. ESA Climate Office. 9 November 2022. [Enligne]. Available online: https://climate.esa.int/en/news-events/estimating-national-greenhouse-gas-emissions-and-sinks-for-the-global-stocktake/ (accessed on 9 November 2022).
16. ODD. *Forum Politique de Haut Niveau sur le Developpement Durable*; ODD: New York, NY, USA, 2017. Available online: https://www.unwomen.org/fr/how-we-work/intergovernmental-support/hlpf-on-sustainable-development (accessed on 11 May 2023).
17. *A/SA.2/07/13*; Acte Additionnel. Politique en Matière d'Efficacité Énergétique de la CEDEAO (PEEC). Chez Politique d'Efficacité Énergétique de la CEDEAO (PEEC): Abuja, Nigeria, 21 June 2013. Available online: https://www.ifdd.francophonie.org/wp-content/uploads/2021/09/727_LEF-107-2.pdf (accessed on 11 May 2023).
18. NGOM; Mbissane. Intégration régionale et politique de la concurrence dans l'espace CEDEAO. In Proceedings of the Chez L'évolution Normative de la CEDEAO en Matière, Abuja, Nigeria, 19 December 2008.
19. Ministere de L'environnement et des Ressources Forestieres. *Politique Nationale de l'Environnement, chez La politique nationale de l'environnement, adoptée par le Gouvernement*; Ministere de L'environnement et des Ressources Forestieres: Lome, Togo, 23 December 1998. Available online: https://environnement.gouv.tg/wp-content/uploads/files/2018/Septembre/POLITIQUE%20FORESTIERE%20DU%20TOGO%20(PFT)%202011-2035.pdf (accessed on 11 May 2023).
20. Boliko, M.C. FAO and the situation of food security and nutrition in the world. *J. Nutr. Sci. Vitaminol.* **2019**, *65*, S4–S8. [CrossRef]
21. Rehof, L.A. *Guide to the Travaux Préparatoires of the United Nations Convention on the Elimination of all Forms of Discrimination against Women*; Brill: Leiden, The Netherlands, 2021.
22. UN-Water. *Water and Climate Change*; The United Nations World Water Development Report; UNESCO: Paris, France, 2020.
23. Guilherme, J.L.; Jones, V.R.; Catry, I.; Beal, M.; Dias, M.P.; Oppel, S.; Vickery, J.A.; Hewson, C.M.; Butchart, S.H.M.; Rodrigues, A.S.L. Connectivity between countries established by landbirds and raptors migrating along the African–Eurasian flyway. *Conserv. Biol.* **2023**, *37*, e14002. [CrossRef]
24. Alfredo, E.I.; Nurcahyo, R. The impact of ISO 9001, ISO 14001, and OHSAS 18001 certification on manufacturing industry operational performance. In Proceedings of the International Conference on Industrial Engineering and Operations Management, Bandung, Indonesia, 6–8 March 2018.
25. Johnsson, F.; Karlsson, I.; Rootzén, J.; Ahlbäck, A.; Gustavsson, M. The framing of a sustainable development goals assessment in decarbonizing the construction industry–Avoiding "Greenwashing". *Renew. Sustain. Energy Rev.* **2020**, *131*, 110. [CrossRef]
26. Tsani, S.; Koundouri, P.; Akinsete, E. Resource management and sustainable development: A review of the European water policies in accordance with the United Nations' Sustainable Development Goals. *Environ. Sci. Policy* **2020**, *114*, 570–579. [CrossRef]
27. P2-P2RS, PPCI-Sahel. *Politique Nationale d'Hygiène et d'Assainissement au Togo. chez Politique Nationale de l'Aménagement du Territoire (PONAT)*; P2-P2RS, PPCI-Sahel: Lome, Togo, 2009.
28. Ministere des Mines et de L'energie. *Plan Actions National d'Efficacité Energétique (PANEE) TOGO. chez Plan Actions National d'Efficacité Energétique (PANEE)*; Ministere des Mines et de L'energie: Lome, Togo, 2015. Available online: https://www.se4all-africa.org/fileadmin/uploads/se4all/Documents/Country_PANEE/Togo_Plan_d_Actions_National_d%E2%80%99Efficacite%CC%81_Energe%CC%81tique.pdf (accessed on 11 May 2023).

29. ANCR-GEM. Bilan de la mise en œuvre de la CCNUCC au Togo et besoins en renforcement des capacités. In Proceedings of the Chez Convention Cadre des Nations Unies sur les Changements Climatiques, Lome, Togo, 8 March 1995.
30. GmbH; GIZ Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ). *Plan National d'Adaption Aux, Chez Plan National d'Adaption Aux*; GmbH: Bonn et Eschborn, Germany, 2017.
31. Republique Togolaise. Troisième Communication Nationnale Du Togo au titre de la CCNUCC (Title: Appui au déploiement du projet « Lumières authentiques pour chaque maison au Togo. Proceedings of the Chez Troisieme Communication Nationale, Lome, Togo, 6 January 2017. Available online: https://view.officeapps.live.com/op/view.aspx?src=https%3A%2F%2Fwww.ctc-n.org%2Fsites%2Fwww.ctc-n.org%2Ffiles%2Frequest%2Ftogo_-_req_ctcn_ref_2017000009_rev04042018-abd.doc&wdOrigin=BROWSELINK (accessed on 11 May 2023).
32. Conférence internationale du Travail. Organisation internationale du Travail C 176. *Convention de l'OIT sur la sécurité et la santé dans les mines, 1995 (n° 176). chez C 176. Convention de l'OIT sur la sécurité et la santé dans les mines, 1995 (n° 176), Genve, 110e session*. 2022. Available online: https://www.ilo.org/dyn/normlex/fr/f?p=NORMLEXPUB:14001:0::NO::P14001_INSTRUMENT_ID:312321 (accessed on 11 May 2023).
33. C176-Convention (n° 176). La sécurité et la santé dans les mines, 1995. Proceedings of the Chez La Conférence Générale de l'Organisation Internationale du Travail, Genève, Switzerland, 6 June 1995. Available online: https://www.ilo.org/dyn/normlex/fr/f?p=NORMLEXPUB:12100:0::NO::P12100_ILO_CODE:C176 (accessed on 11 May 2023).
34. *Republique, President de la, Constitution De La Iv' Republique*; Journal Officiel De La'republîque Togolaise: Lome, Togo, 1992. Available online: https://www.ilo.org/dyn/natlex/docs/SERIAL/38025/95144/F1715143836/Constitution%201992.pdf (accessed on 11 May 2023).
35. Loi-N°2007-011. *Loi n° 2007-011 du 13 Mars 2007 Relative à la Décentralisation et aux Libertés Locales*; Journal Official: Lome, Togo, 13 March 2007; pp. 1–32. Available online: https://www.ilo.org/dyn/natlex/natlex4.detail?p_lang=en&p_isn=76216&p_country=TGO&p_count=243 (accessed on 11 May 2023).
36. LOI-n°-00919/06. *Eaux—Forêts—Environnement*, Spécial. 19 June 2008; p. 20.
37. Législation-n°2016-002. *Loi n°2016-002 du 04 Juin 2016 Portant Loi-Cadre sur L'aménagement du Territoire*, Environnement gén.; Terre et sols; Mer. 4 June 2016.
38. LegislationLoi n°2008-005. Loi n° 2008-005 du 30 mai 2008 portant loi-cadre sur l'environnement. *J. Off. République Togol.* **2008**, *19*, 1–18.
39. Loin°2021-012du. *Code du Travail de la République Togolaise*, 18 June 2021.
40. Législation-n°2009-007. Loi n° 2009-007 portant Code de la santé de la République togolaise. *J. Off. République Togol.* 2009, pp. 1–57. Available online: https://www.fao.org/faolex/results/details/fr/c/LEX-FAOC093366/ (accessed on 11 May 2023).
41. ADA–GAIC, Groupement. *Cadre de Gestoion Environnementale et Sociale Togo, Programme de Renforcement de la Resilience a l'insecurite Alimentaire et Nutritionnelle au Sahel (p2-p2rs, Ppci-Sahel, 2020–2025)*, 16 March 2011; 175p.
42. MTESS/MS. *Portant Création de Service de Sécurité et Santé au Travail. pris Conformément aux Articles 175 et 178 du code du Travail*, 7 October 2011.
43. Primature. Membres du Gouvernement. 2020. [Enligne]. Available online: https://primature.gouv.tg/gouvernement/ (accessed on 17 February 2023).
44. Législation. Décret n° 2019-130/PR du 09 Octobre 2019 Fixant les Modalités D'organisation et de Fonctionnement du Fonds d'Appui aux Collectivités Territoriales (FACT). 2019-10-09. 26 June 2019. [Enligne]. Available online: https://www.fao.org/faolex/results/details/fr/c/LEX-FAOC191842/ (accessed on 12 December 2019).
45. Joseph, S.; Jenkin, E. The United Nations Human Rights Council: Is the United States Right to Leave this Club? *Am. U. Int'l L. Rev.* **2019**, *35*, 75. [CrossRef]
46. Дешко, Л. National Institutions Established in Accordance with the Paris Principles, Engaged into the Promotion and Protection of Human Rights in the System of Internal Means of Security. *Конституційно-Правові Академічні Студії*. 2020, p. 2. Available online: http://journal-kpas.uzhnu.edu.ua/article/view/231403 (accessed on 11 May 2023).
47. Maestro, M.; Pérez-Cayeiro, M.L.; Chica-Ruiz, J.A.; Reyes, H. Marine protected areas in the 21st century: Current situation and trends. *Ocean. Coast. Manag.* **2019**, *171*, 28–36. [CrossRef]
48. Päivinen, R.; Lindner, M.; Rosén, K.; Lexer, M.J. A concept for assessing sustainability impacts of forestry-wood chains. *Eur. J. For. Res.* **2012**, *131*, 7–19. [CrossRef]
49. Malik, S.; Sadiq, N.; Anwar, S.; Qazi, U. Consumer choice of health facility among the lowest socioeconomic group in newly established demand-side health-financing scheme in Khyber Pakhtunkhwa, Pakistan. *East Mediterr Health J.* **2021**, *27*, 10. [CrossRef]
50. Dantas, T.E.; De-Souza, E.D.; Destro, I.R.; Hammes, G.; Rodriguez CM, T.; Soares, S.R. How the combination of Circular Economy and Industry 4.0 can contribute towards achieving the Sustainable Development Goals. *Sustain. Prod. Consum.* **2021**, *26*, 213–227. [CrossRef]
51. Tsolakis, N.; Niedenzu, D.; Simonetto, M.; Dora, M.; Kumar, M. Supply network design to address United Nations Sustainable Development Goals: A case study of blockchain implementation in Thai fish industry. *J. Bus. Res.* **2021**, *131*, 495. [CrossRef]
52. Amr, M.S.M. *The Role of the International Court of Justice as the Principal Judicial Organ of the United Nations*; Brill: Leiden, The Netherlands, 2021.

53. Wang, Y. Has China Established a Green Patent System? Implementation of Green Principles in Patent Law. *Sustainability* **2022**, *14*, 11152. [CrossRef]
54. Freedman, M.; Jaggi, B. Global warming disclosures: Impact of Kyoto protocol across countries. *J. Int. Financ. Manag. Account.* **2011**, *22*, 46–90. [CrossRef]
55. Sutanto, E.M.; Kurniawan, M. The impact of recruitment, employee retention and labor relations to employee performance on batik industry in Solo City, Indonesia. *Int. J. Bus. Soc.* **2016**, *17*, 375–390. [CrossRef]

Disclaimer/Publisher's Note: The statements, opinions and data contained in all publications are solely those of the individual author(s) and contributor(s) and not of MDPI and/or the editor(s). MDPI and/or the editor(s) disclaim responsibility for any injury to people or property resulting from any ideas, methods, instructions or products referred to in the content.