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# ***Investigating the Role of Law Enforcement in Preventing Environmental Crimes Related to Industrial Waste in Specific Regions of Ethiopia, by Shenkutie Mulatu,<sup>a</sup> and Yeshimar Yigzaw,<sup>b</sup>***

## **Abstract**

*Environmental crimes related to industrial waste refer to illegal activities conducted by industrial factories that pose harm to the environment and human health. In many developing nations, law enforcement agencies underestimate the prevalence of such crimes. This study focuses on investigating the role of law enforcement institutions in preventing industrial waste-related environmental crimes within selected regions and city administrations of Ethiopia. Employing a qualitative research approach with an exploratory design, the study used key informant interviews and document analysis as data collection tools. The researchers purposively selected sample regions (Amhara, Oromia, Sidama, and Harari) and two city administrations, engaging participants from law enforcement bodies (regional police, code enforcement (Militia)), environmental protection authorities, and communities. The findings reveal that although there are national and international laws addressing industrial waste-related environmental crimes, their enforcement is limited because of a lack of awareness about the legal framework within the country. Environmental protection authorities play a significant role in enforcing environmental laws and standards compared to other law enforcement agencies. Opportunities for preventing industrial waste-related environmental crimes include existing environmental laws, community participation, stakeholders, and addressing environmental cross-cutting issues. Conversely, challenges to effective prevention include a lack of cooperation among law enforcement bodies, limited awareness about crimes, insufficient resources, and misperceptions by responsible bodies. Based on these findings, the study proposes suggestions to strengthen law enforcement agencies.*

Keywords: law enforcement, industrial waste crime, environmental crime, crime prevention, environmental protection, Ethiopia

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## **Introduction**

This research delves into the role of law enforcement in preventing industrial waste-related environmental crimes in specific regions and city administrations of Ethiopia. The 1995 Constitution of the Federal Democratic Republic of Ethiopia (FDRE), its environmental policy, and later legislations encompass environmental rights aligned with major international environmental law conventions. These rights include the right to live in a clean and healthy environment, access to justice, and information, as well as public participation (Amsalu, 2019).

Rapid industrialization in Ethiopia has resulted in the generation of industrial wastes, including hazardous ones, yet awareness of these wastes and their impact on humans and the environment still is limited (Menbere, 2019). Industrial wastes, occurring in solid, liquid, and gaseous states, are often considered useless byproducts of production processes, contributing to environmental pollution (Mekonnen, 2012). In response, the government has enacted various proclamations to manage wastes and control environmental crimes, particularly those related to industrial waste.

The environmental crime situation report in Ethiopia (2009) highlights the prevalence of environmental crimes related to pollution, often going unreported to law enforcement agencies, with little accountability for violators (Mwebaza et al., 2009). Major impediments to effective implementation include the government's lack of human resources and proper technology for environmental protection, prioritization of economic growth over environmental concerns, environmental corruption, and the inadequate responsiveness of public, policy makers, executives, and judicial organs to environmental rights (Amsalu, 2018).

Inspections of industrial facilities reveal non-compliance with standard limit requirements set by regulatory bodies and a lack of a separate institutional system for hazardous waste management (Assnakew, 2017). Law enforcement agencies, particularly the Ethiopian Federal Police Commission, display a low profile on environmental crime, partly because of its novelty in Ethiopia and limited active involvement of police officers in environmental crime prevention.

Literature suggests a focus on waste management rather than waste-related crimes, with little attention from enforcement institutions on preventing environmental crimes compared to other crime types. Specialized environmental inspectors enforce environmental standards under Article 7 of the Environmental Pollution Control Proclamation No. 295/2002. However, limited research in the study area addresses law enforcement institutions' efforts in preventing industrial waste-related crimes, prompting this study to fill the knowledge gap by exploring their roles.

The general aims of this study were to investigate law enforcement roles in preventing industrial waste-related environmental crimes in selected regions and city administrations. The specific aims included examining legal frameworks, assessing law enforcement practices in preventing industrial waste-related environmental crimes, and finding opportunities and challenges.

## **Research Methods**

The study focused on Oromia, Amhara, Harar, and Sidama regional states, along with two city administrations (Addis Ababa and Dire Dawa). Employing a qualitative research approach with an exploratory research design was crucial for delving into the roles of law enforcement bodies in preventing industrial waste-related environmental crimes.

## **Sampling Techniques**

Purposive sampling proved instrumental in describing a phenomenon or developing insights when little is known about it (Kumar, 2014). Organizational, participant and document selection was purposeful, conducted in areas chosen based on the prevalence of industries. Researchers were considered participants because of their knowledge and experiences with environmental crime issues. Interviews were selectively conducted with individuals having background information on industrial waste-related environmental crimes and law enforcement roles.

## **Data Collection Tools and Procedures**

Primary data collection involved face-to-face interviews with key informants, such as leaders and experts from police institutions, environmental protection authorities, and code enforcement. These informants were selected based on their positions and ability in industrial waste protection. Secondary data, relevant to the study, were sourced from documents, reports, and training curricula of environmental protection authorities, code enforcement, and police institutions. Document analysis was performed on various environmental policies, including proclamations, regulations, and police training curricula, to supplement findings from key informant interviews.

## **Source of Data**

Data sources included primary inputs from regional, city administration and federal environmental protection authorities, as well as regional and city administration police

institutions and communities. Secondary data were derived from the FDRE constitution, proclamations, police training curricula, regulations, books, journals, and existing research findings.

### **Data Analysis Techniques and Procedures**

Voice audio tapes supported data collection, with recordings labeled, translated, and transcribed into Word files. A coding system using MS-Word eased the rapid and comprehensive summary of information for each study question. Themes were developed based on categorical and text codes, allowing for the classification of respondents into specific groups. Themes were refined in alignment with the study's aims, incorporating the views and ideas of respondents. Data collected from interviews were discussed and integrated into the data discussion and interpretation section.

### **Ethical Consideration**

The researchers adhered to standard ethical practices, ensuring participant privacy and data confidentiality. Oral informed consent was got before administering study tools, with participants well-informed about the study's purpose.

### **Results and Discussion**

#### **Results**

The sample institutions were demographically distributed: 18 participants from police organizations (Oromia, Addis Ababa, Sidama, Harar, Dire Dawa, Amhara), 11 participants from the environmental protection authority (Amhara, Addis Ababa, Dire Dawa, Sidama, Harar, Oromia), nine participants from city code enforcement, and 12 participants from the community. 50 key informants were involved. The study results are presented based on the specific aims as follows.

#### **Legal Frameworks to Prevent Industrial Waste-Related Environmental Crime**

National and international laws play a crucial role in controlling industrial waste-related environmental crimes. At the national level, the Environmental Protection Agency of Ethiopia oversees the adherence to environmental laws, including solid waste management regulations. The National Environmental Policy, formulated by the Agency in 2011, supplies guidelines for waste management execution. While legal frameworks exist to prevent environmental crimes, implementation challenges persist. The following legal frameworks directly affect the prevention and control of environmental crimes, especially those related to industrial waste.

#### **Ethiopian Environmental Policy**

Approved in 1997, the policy aims to manage environmental resources responsibly, fostering sustainable growth and improving the quality of life for all Ethiopians. Its key sub-articles address waste management, emphasizing garbage collection services, solid waste recycling, safe disposal, and the need for scientific research on sanitary landfills.

#### **Public Health Protection Proclamation No. 200/2000**

Article 12 of this Proclamation mandates waste collection in designated locations, ensuring it does not jeopardize public health or the environment.

#### **Environmental Impact Assessment Proclamation No. 299/2002**

It requires an Environmental Impact Assessment (EIA) for projects with significant effects on the environment, including waste disposal facilities like landfills. It helps municipal solid waste management systems through the EIA process.

#### **Environmental Pollution Control Proclamation 300/2002**

It sets up a legal obligation to prohibit environmental pollution, with Article 5 governing the handling of hazardous and non-hazardous trash. Emphasizes collaboration between environmental agencies and municipal waste management for effective implementation.

#### **Solid Waste Management Proclamation No. 513/2007**

The first nationwide policy on solid waste management aims to prevent issues arising from waste and promote its beneficial use. It covers planning, transportation, recycling, burning, disposal and community participation.

#### **Electrical and Electronic Waste Management and Disposal Regulation No. 425/2018**

The first regulation in Ethiopia addressing the management and disposal of old electronics, emphasizing environmental impact reduction through practices like fixing, reusing, and recycling.

#### **Hazardous Waste Management and Disposal Control Proclamation No. 1090/2018**

It sets up a system for safe disposal of hazardous waste, preventing harm to humans, animals, and the environment. It further outlines principles for clean production and regulations for labeling, storing, reusing, treating, and recycling hazardous waste.

#### **Criminal Code of the Federal Democratic Republic of Ethiopia Proclamation No.414/2004**

Article 517 prohibits water contamination, and Article 519 criminalizes environmental pollution. Articles 520 and 521 address mishandling of dangerous waste, illegal transfers and violations of environmental impact assessment requirements.

#### **Ratified International Waste Conventions**

Ethiopia follows the Rotterdam Convention (proclamation No. 278/2002) and the Basel Convention (proclamation No. 357/2003), contributing to global efforts in regulating the international trade of dangerous chemicals and waste disposal. By adhering to these legal frameworks, Ethiopia aims to enhance its waste management practices domestically and contribute to global environmental protection.

As explained by most of the participants of the study, there is a legal framework to protect the environment and prevent environmental crime, particularly industrial waste related crime. A key informant from Addis Ababa Environmental Protection Authority (AAE2) noted: "In order to prevent industrial pollution, there is a legal framework for prosecuting criminals who violate the Council of Ministers regulation. For preventing environmental crimes, there is a simple law, but for enforcing the law and regulations, an assumption is made" (Addis Ababa KII, 2022).

Besides the above, an Addis Ababa Peace and Security Office Expert (AAPS1) opined: "There are laws that govern environmental crime, as said in Ethiopia's penal code. Even though the criminal code made it clear what would happen if laws were broken, we do not always follow through and work to prosecute the offender," (Addis Ababa KII, 2022).

Contrary to the above statement, respondents from regional and city administration police offices said that police institutions lack a legal framework for environmental crime. Here, a Harar Police Crime Prevention Leader (HP2) said:

The police are not subject to a clear legal framework. But despite our limited understanding, there might be. Although I do not have an idea, it would be good if it changed the work for us because we would then have to do a lot of work based on that law. If there is a legal framework, I believe that if we work on it and educate the police and other relevant bodies, it will help society and bring better things (Harar KII, 2022).

From this statement, the researchers understand that there is knowledge gap in understanding legal framework to prevent industrial waste related environmental crime.

### **Law Enforcement Practice on Prevention of Industrial Waste Related Environmental Crime**

In this section, we present the findings relating to the law enforcement practice in preventing industrial waste related environmental crime. Our findings are organized based on three law enforcement agencies' perspectives: police, environmental protection authority, and city code enforcement.

#### **Police Organization**

The Ethiopian police forces are frontline promoters and enforcers of laws of the country. They are present at grassroots levels and as such, can ensure not only those environmental laws are followed but can also raise awareness and understanding of environmental matters. The primary role of the police organization is to prevent any crime committed in the country. The police should prevent any type of crime to reduce the impact of it on human beings and loss of property. From the police officers' point of view, the role of police in industrial waste related environmental crime was considering low. According to a Harar Police Crime Investigation Leader (HP1):

There is an assumption in the police organization that the industrial waste related environmental crime is not considered as a crime as like other types of crime. The problem is a good governance issue. It is not considered as a crime. I do not think that the problem solved by the police. The understanding with us is that if the problem arises, the destroyed property compensated by civil law. If there is a complaint that a crime has been committed, we do the work of investigation and criminal prosecution, but there is not much awareness about this problem (Harar KII, 2022).

In addition, an Addis Ababa Police Officer (AAP1) expressed:

In Addis Ababa, Kaliti sub-city, for example, there are many factories, including leather factories. Even if we look at the Awash Beverage and Walia Factory, the local community is exposed to various health problems and the effluents from these factories are diverted to the river. We are hearing such complaints from the communities, but Addis Ababa police commission did not give emphasis to solve the problems. We consider the problem is solved by environmental authorities and local leaders (Addis Ababa KII, 2022).

The prevention of industrial waste crime is not considered a primary role for police officers, unlike other types of crime. Police involvement in preventing industrial waste crime is minimal. Most interviewees believe the police discharge their responsibilities passively. Rather than actively preventing waste-related crime, the police act in a supportive role for the

environmental protection authority and city code enforcement office. According to the interviewees, a Harari Police Leader (HP 2) opined: "The police will have a role in prevention of industrial waste related crime. In rural areas, the community first gives their complaint to Militia. When the case is beyond Militia ability and gives it to the police. The police also work with the administration to write a letter to the affected industry/factory because it is causing such damage." (Harar KII, 2022).

A police leader in Amhara Region reported:

Police officers do not have awareness about industrial related environmental crime. Investment, tourism, and industrial police were set up, but there is no clear job description for practical work. Rather than protecting and investigate industrial waste related environmental crime, the department set up for industrial physical security, to create a safe environment for investors, to protect tourist attraction areas and for safety of investors that create crime environment (Bahidar KII, 2022).

Mostly, the police organization cannot discharge their responsibilities in prevention of environmental crime particularly industrial waste related crime. The role of the police is limited in prevention of industrial waste related crime as compared to other types of crime. Failing to prioritize environmental crimes, particularly industrial waste related crime, as a major part of police policy has meant that they are assigned low levels of priority.

#### **Environmental Protection Authority**

The environmental protection authority is set up primarily to protect the environment. The authority also set up thorough out the country at federal and regional level. The environmental organs establishment proclamation No. 295/2002 re-established the federal EPA as an autonomous organization vested with expanded mandates. The law also decentralized the original central structure of environmental management. All the participants of the environmental protection authorities said that the authorities had a duty in enforcing environmental laws, proclamations, and regulations. Enforcing environmental standards are the responsibility of a specialized body of the environmental inspectorate. The authorities also strictly enforce the environmental impact assessment proclamation. Here, a Harar Environmental Protection Authority Manager (HE1) said:

This office's principal duty is to take several actions to stop the harm brought on by environmental contamination. According to the authority granted when the decree was founded, environmental protection primarily comprises the prevention of environmental pollution, hence control is its primary function. Environmental laws are passed. When environmental rules are broken, data are gathered by the law, and environmental criteria are used to interpret the law and decide whether pollution has occurred (Harar KII, 2022).

This shows that, environmental protection authority practices the prevention of industrial waste related environmental crime. In addition, the authority has laws that are used for protection and control of crime.

Besides this, an expert from Sidama Environment Protection Authority (SEI) reported: "The industries were first found outside of residential areas, and we, as the environmental protection authority office watched over how they were prevented environmental pollution from harming the neighborhood. If we noticed any issues, we would inform the industry owners." (Hawasa KII, 2022).

From the above statements the researchers understand that the environmental protection authorities have a role in preventing environmental pollution. Based on the laws and regulations, the authority enforces to prevent environmental damage.

#### **Code Enforcement Office/Militias**

The city's Code Enforcement Office is set up to enforce regulations which are enacted by their respective administration. The office can prevent and control illegal activities. As most of the participants said that the code enforcement office works in preventing and controlling illegal activities especially related to industrial wastes. From the participants, an Addis Ababa Code Enforcement Office Leader (AAC2) noted: "In order to stop and manage illicit activity, my office collaborates with other parties involved. First, we educate waste producers on the proper handling and disposal of wastes without endangering human health. We take corrective measures whenever there is a violation of the law." (Addis Ababa KII, 2022).

The code enforcement office has a role in preventing a violation of rules and regulations about industrial waste related environmental crime.

From the above finding, the researchers understand that there is limited effort from the law enforcement agencies in preventing industrial waste related environmental crime in the study area.

#### **Law Enforcement Opportunities on Prevention Industrial Waste Related Environmental Crime Legal Frameworks**

There are different laws, proclamations and guidelines which contribute to preventing and controlling environmental crime, particularly industrial waste related crime. As said by the environmental protection authority interviewees, there is a legal framework to prevent industrial waste related crime. A Dire Dawa Environmental Protection Authority Expert (DEP1) noted, "As a law enforcement agency, there is a clear law to prevent environmental pollution, but we are working to act against the culprits, but this environmental crime law has a clear legal framework." (Dire Dawa KII, 2022).

In addition, a Harar Environmental Protection Manager (HEP1) stated, "There is national environmental policy, laws, proclamations, environmental standards to prevent environmental crime particularly industrial waste. In our case, the regional government also adopts and customizes the existing environmental laws to control environmental pollution and damage." (Harar KII, 2022).

#### **Community Participation**

All the participants of the study recognize the existence of participation from the community in supplying information about the problems which they face. As with most industries/factors found in the residents of the community, they easily find problem. Most of the participants from the community state that they are actively involved in supplying information about the problems. From community participant, a Harar City interviewee said:

We met an issue at the Harar Beer Factory, which we reported to the *kebele* administrator. However, despite our efforts, the problem persisted. As a result, we escalated the issue and contacted the Environmental Protection Authority and the police station for aid. Despite their involvement, the problem is still unsolved to this day. We are continuing to work towards finding a resolution and ensuring that such issues do not happen again in the future (Harar KII, 2022).

From the police respondents in the participation of the community, a Harari Police Crime Prevention Leader (HP2) stated:

The level of community involvement in Harar is good. Because of the waste and fluids produced by industry, the Harar beer factory caused harm to the community farm and health. To address the issue, they reported it to the proper body beginning with the local administrator. They gather and travel to the area if the district cannot address them. The liquid from Harar beer has recently caused damage to some people's farms, and many of them have reached the point of staging a peaceful protest because they have not received an answer to their petitions or questions (Harar KII, 2022).

The above statement supports the existence of community participation in addressing the problem. For preventing environmental crime, communities typically play a significant role in both environmental authority and law enforcement organizations.

#### **Presence of Different Stakeholders**

**The environment** is not one law enforcement agency business. There are different stakeholders in federal and regional level who work in the prevention of environmental crime particularly industrial waste related crime. The police institutions play a role in enforcing national and international laws that relate to environmental crime. In addition, there are also regulations and guidelines for the environmental crime protection authority that works on environmental protection standards and specification. There are also code enforcement agencies, investment bureaus, federal and regional environmental protection authority.

The main stakeholders in the prevention of environmental crime were governmental and non-governmental organizations that work on issues like poverty, economic growth, sustainable peace and security, environment-smart agriculture and natural resource management.

#### **A Critical Issue**

Environmental crime is serious as any other crime affecting society today. The environment is a burning issue in the world. The protection of the environment is support by different stakeholders. As the issue is hot, our government develops environmental policy, laws, different proclamations, and guidelines. The government also signed two international agreements. There is also NGOs which work in the environment's protection. Especially the government enacts EIA proclamation to assess the impact of a project on the environment. All the environment protection authority participants state that EIA proclamation should strictly implement to prevent environment damage before starting any development activities or projects. Here, a Harari Environment Protection Authority Manager (HEP1) said:

In earlier time, there was a problem to giving license to the investors to start their projects. As a result, anyone can build any project without the permission of the environmental protection authority but know any project should get EIA permission from the authority after conducting environmental impact assessment. Currently in our office; the environment impact assessment proclamation is strictly administered (Harar KII, 2022).

#### **Challenges of Law Enforcement in Industrial Waste Related Environmental Crime Prevention**

There are different challenges which face law enforcement agencies in prevention of industrial waste related environmental crime.

### **Lack of Awareness about the Crime**

All the concerned law enforcement agencies have no mutual understanding about environmental laws. There is a problem in the existence of environmental laws and enforcer bodies. Environment protection is given to the environment protection authority. From the law enforcement agencies, Police is the frontline and the one which have a significant role in the prevention of industrial waste related crime, but officers assume that the prevention of the industrial waste related crime is primarily to the environment protection authority and code enforcement bodies.

From the police officer respondents, Harar police leaders (HP1) said that: -

As police officers, we must contend with a lack of knowledge about environmental crime prevention. Environmental laws are not sufficiently known. Some people believe that environmental protection is unrelated to police work. When such situations arise, it is reasonable to conclude that the environmental protection authority is responsible, as is the enforcement of the laws (Harar KII, 2022).

In support of the above statement, a Dire Dawa police leader (DP2) similarly opined that “As far as our office is concerned, we are not aware of any environmental criminal law. Because there is no established legal framework, we are not defending crimes against the environment.” (Dire Dawa KII, 2022).

The community may not have an accurate understanding of a problem, which could be categorized as a crime and instead consider it as a problem of good governance. This misinterpretation can lead to a lack of proper action and may cause the problem persisting or worsening. One of the Harari police leaders (HP2) noted, “The community raises the problem by considering it as a problem of good governance for the administration of the region. There is nothing for them to come to the police and ask their questions. But they give their complaints to the Kebele farmer's association or district in the rural area. If the district does not resolve them, they gather and come to the region.” (Harar KII, 2022).

From the above ideas, the researchers acknowledge that there is knowledge gap within the police officers about environmental laws. The problem of awareness about environmental crime is not limited to police officers but also the community faces this challenge.

### **Lack of Coordination Between the Stakeholders**

Environmental protection needs more coordination among different law enforcement agencies. Law enforcement agencies have not mutual understanding to discharge their responsibilities in prevention of environment crime particularly industrial waste related crime. Because of this most law enforcement, agencies cannot work together to tackle industrial waste related crime. Most of the participants of the study said that there was a lack of coordination among the stakeholders in preventing industrial waste related environment crime. An improvement in environmental law enforcement fraternity relations could be achieved through ability building and environmental crime, law, and enforcement training, which should be the principal strategy to enhance the environmental policing ability of the police. This should be done with the acknowledgement that different multi-stakeholder actors have their own area niches in the larger domain of environmental management and enforcement, e.g., the police, judges and prosecutors, environmental management authorities, and others mandated by law to protect the environment. A Federal Environmental Protection Authority Expert (FEP1) stated:

Law enforcement agencies are limited on the handling of environmental crimes and enforcement of law with responsibly. This is because of lack of police officers' initiatives. The role of preventing industrial waste related crime is given to the environmental protection authority. The reason is that they have little knowledge of environmental law; there are gaps in their knowledge about basic environmental crime prevention and investigations. Besides, environmental crime protection authority also did not inform the crime to police officer, the authority handles investigation of civil and crime cases (Addis Ababa KII, 2022).

Besides the above ideas, a Harari police leader (HP2) said:

Within law enforcement agencies there are no clear responsibilities in the prevention of environmental crime. There is no system to work together with the concerned body to prevent this type of crime. For example, we employ officers to prevent and investigate other crimes like violence, property, state crimes but the environmental protection authority also tries to prevent industrial waste related environmental crime and problems. There is not clearly cooperation among the concerned stakeholders in preventing such crimes (Harar KII, 2022).

From the above findings, there is a coordination problem among the law enforcement agencies.

### **Inadequate Resources**

As most of the respondents explain that there are shortages of resources to enforce the environmental laws. Especially as mentioned by most of the environmental protection authority participants there are shortage of vehicles to strictly enforce the environmental laws, proclamation and guidelines by supervising the industries or factories regularly. There is also a lack of laboratories to test the environment pollution status. There is a shortage of workforce to prevent and investigate environmental crime. Here, an environmental expert from Dire Dawa (DEP2) said: “There is a shortage of vehicles to supervise industries of factories regularly. There is also a lack of laboratories to test the environmental pollution status and the environmental experts also limited.” (Dire Dawa KII, 2022).

### **Misperception about Responsible Law Enforcement Agency in Prevention of Industrial Waste Crime**

Most of the participants of the study assumed that the ones primarily responsible for industrial waste and environmental crime were the environmental protection authorities. Environmental crime is given to the authority. The other stakeholders have a supportive role in the prevention of environmental crime, particularly industrial waste crime. Here, a Dire Dawa police leader (DP1) noted: “In my understanding, environmental protection and enforcement of environment law are primarily given to the environmental protection authority. I understand the environment crime is a problem. The police role is supportive when the environmental protection authority needs our service.” (Dire Dawa KII, 2022).

In addition, a Harar police leader (HP2) narrated:

From my view, the primary duty to control environmental problem is environmental protection authority and code enforcement office. As you know, the police's primary duty is to prevent and investigate crime rather than focusing on such problems. Environment problem is addressed by enforcing environment regulations which needs experts or professionals (Harar KII, 2022).

From the above statement there is misperception about the responsible body in the prevention of industrial waste related environmental crime in police organization.

### **Challenge from Owners of the Industry**

Most of the participants of the study show that there is a challenge from the owner of the industries in prevention of industrial waste related environmental crime. Because of prohibitive costs of treating and disposing hazard wastes and other wastes, most of the owner of the industry needs illegal disposing of wastes. Here, an officer at Addis Ababa environmental protection authority (AAE1) noted:

The investors or owners of the industry have long hands to conceal their illegal practice. And because of their connection with the government bodies, they try to solve the problems by giving some amount of money to the society. I can't think of the act as a crime even if there are laws which define the act as a crime. Especially in our country as we know the industry is small, it is difficult to strictly enforce the environmental laws (Addis Ababa KII, 2022).

### **Police Training Gaps**

As shown in the above (lack of awareness) , law enforcement workers did not have awareness and knowledge about environmental crime prevention. This is because of lack of different issues like on-the-job training, formal education, workshops, conferences and interagency discussion. Police education and training center lack the ability to incorporate environmental crime prevention technique in the curriculum and training manuals. Because of this police officers cannot know the legal frameworks, proclamations, and regulations.

According to participants from the police institution, they did not know about environmental crime during their training. Police training focus on property and economic crime, but environmental crime was not focused. That is why police officers and members were not aware about the issue.

The researchers analyze the training curricula which given by the Ethiopian police university and assure that the Ethiopian police university gives training for the police officers from short-term training to master level and mainstream environment throughout its curricula but gives little emphasis in module development and training materials.

## **Discussion**

### **Legal Frameworks**

Ethiopia ratified environmental laws in the constitution and has proclamations and laws on environmental crime. Those laws are not implemented or enforced. Enforcing environmental laws and regulations is an important ingredient in protecting the environment and reducing environmental harm (Nwazi, 2022). This is achieved by various environmental law enforcement agencies running from a global to local level. For instance, some environmental law enforcement agencies operate only at an international level whereas others only operate at the local level (Tomkins & Tomkins, 2018). Without a balance of interests, implementation of the law is difficult. Using political campaigns to enhance enforcement in China shows that the flexibility of short-term policy instruments can offer incremental improvements to enhance the balance between competing interests, and thus increase the effectiveness of the legal system (van Rooij, 2006).

The present study revealed that there was a legal framework in preventing environmental crime, particularly industrial waste related crime. There are laws, proclamations, regulations which have an impact on industrial waste related environmental crime prevention.

### **Practice of Industrial Related Environmental Crime Prevention**

As shown from the data, the practices of law enforcement on industrial related environmental crime are weak. This is because of lack of awareness, training gaps, misperception of the community and police members, and not considered as a crime. Environmental crimes are an area of increasing concern, not only because of their globalized nature, but because these crimes have impacts beyond the capacity of criminal justice systems of most states to comprehend or address (Dorn et al., 2007.). Environmental crimes increasingly draw global attention as widespread understanding of their short-term impacts and long-term consequences grows. Violations of environmental laws and regulations might be local, but the effects that follow may be felt long distances away (Faroque & South, 2022).

According to a report on environmental crime in Ethiopia, there are more pollution-related crimes than expected. Many cases were not reported to the police, so the people who did violations were not punished (Mwebaza et al., 2009.). Similarly, to this, the study revealed that there is limited effort in preventing industrial waste related environmental crime from law enforcement agencies. The environmental protection authorities have good practice in preventing industrial waste related crime by enforcing different proclamation and regulation as compare other law enforcement agencies, but the authorities have taken administrative corrective action for the violation of environmental laws rather than considering the problem as a crime.

### **Opportunities of Industrial Related Environmental Crime**

The existences of different stakeholders are important in prevention of environmental crime. The study shows that the environmental protection authority has a key role in enforcing environmental laws and standards. The authority also has role in supervise each industrial site and take corrective action when there violates environmental laws and standards.

The environment is cross cutting which is becoming a fantastic opportunity to prevent industrial waste related environmental crime. There is a concern from the government, civil society, NGOs, and communities.

### **Challenges of Law Enforcement on Industrial Related Environmental Crime**

According to environmental crime situation report in Ethiopia, there are significant misunderstandings in the police force about its role about environmental crime and training for police officers in environmental law is quite minimal. This is clear from the low-profile environmental crime committed within the Federal Police Commission. In Ethiopia, the rapid industrialization has led to the generation of industrial wastes including hazardous ones. But, knowledge of these wastes and their impact on humans and the surrounding environment is very limited (Menbere, 2019).

According to the study, police officers have a limited understanding of environmental laws and are not as involved in enforcing them for industrial waste-related environmental crimes, compared to other types of crimes. There is a feeling among law enforcement agencies that environmental law violations are minor issues, rather than serious crimes.

In this study, weak collaboration among concerned institutions is also a challenge. Other studies show the importance of coordination among stakeholders. For example, to build capacity and capability, the activities and collaborations of environmental crime response agencies have tended to naturally occur around networks, which are geographically based, discipline-based and commodity-based (Faroque & South, 2022). The initial importance of multi-agency

networking and collaborative practices stems from simple economics, especially given the pressures for environmental law enforcement to improve at the same time as the need for it expands (Barrett & White, 2018). The effectiveness of environmental law enforcement, particularly in the light of restricted budgets and under-resourced units, will very much depend upon how well partnerships are formed and strategies implemented, and the flexibility of interventions in rapid social and ecological change (Huisman & Van Erp, 2013).

## Conclusion and Recommendation

The study reveals that the country has legal frameworks (laws, proclamations, regulation, and guidelines and signed international agreements) which regulate the management of wastes in order to control the commission of environmental crime particularly industrial waste related environmental crime. Even though legal frameworks are accessible to prevent industrial waste related environmental crimes, there is limited in practice in enforcing the existing environmental laws by the law enforcement agencies. The federal and regional environmental protection authorities have a role in enforcing environmental laws and standards as compared to other law enforcement agencies. The existing environmental laws, community participation, presence of stakeholders and environmental cross-cutting issues are considered as an opportunity to prevent industrial waste related environmental crime. Lack of cooperation among the stakeholders, lack of awareness about industrial waste related environmental crime, lack of adequate resources, and misperception about the responsible bodies challenge the effective prevention of industrial waste related environmental crime.

Based on the findings of this study, in order to strength, the law enforcement agencies in prevention of industrial waste related environmental crime; the researchers suggest the Ethiopian government to develop a system in which the law enforcement agencies work together in prevention of industrial waste related environmental crime. The federal, regional, and city police commissions should set up specialized environmental crime prevention and investigation departments in order to strictly enforce the existing environmental laws.

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## Reference

- Akintunde, E. A (2017). *Theories and Concepts for Human Behavior in Environmental Preservation*. 1(2), 120–133. <https://doi.org/10.26502/JESPH.012>
- Amsalu, D (2018). Environmental rights in Ethiopia: Shifting from theory to practical realization. *Journal of Sustainable Development Law and Policy (the)*, 9 (2), 48. <https://doi.org/10.4314/jsdlp.v9i2.4>
- Amsalu, D (2019). Environmental rights in Ethiopia: Shifting from theory to practical realization environmental rights in Ethiopia: shifting from theory to. December 2018. <https://doi.org/10.4314/jsdlp.v9i2.4>
- Anne-Michelle, S. (2015). Book reviews: Environmental Crime and its Victims Perspectives within green criminology. In *Environmental Law Review* (Vol. 17, Issue 2). <https://doi.org/10.1177/1461452915577778a>
- Assnakew, M (2017). Study of Hazardous Industrial Waste Management Practices and Development of Hazardous Industrial Waste Management Guidelines in Addis Ababa. 1 (8), 33–39.
- Awuchi, C. G (2017). Industrial waste management: brief survey and advice to cottage, small and medium scale industries in Uganda industrial waste management: Department of

- Biological and Envi. *International Journal of Advanced Academic Research | Sciences, Technology & Engineering*, 3 (1), 26–30.
- Baird, J., Curry, R., & Cruz, P (2014). An overview of waste crime, its characteristics, and the vulnerability of the EU waste sector. *Waste Management and Research*, 32 (2), 97–105. <https://doi.org/10.1177/0734242X13517161>
- Banks, D., Davies, C., Gosling, J., Newman, J., Rice, M., Wadley, J., & Walravens, F (2008). Environmental Crime. A threat to our future. *Environmental Investigation Agency*, 20.
- Barrett, S., & White, R (2018). Disrupting environmental crime at the local level: an operational perspective. *Palgrave Communications*, 1–7. <https://doi.org/10.1057/s41599-017-0006-3>
- Bovornkijprasert, S., & Rawang, W. (2016). Integration of environmental education and environmental law enforcement for police officers. *International Journal of Environmental and Science Education*, 11 (12), 5698–5709.
- Brennan, C. (2016). The enforcement of waste law in Northern Ireland: Deterrence, dumping and the dynamics of devolution. *Journal of Environmental Law*, 28 (3), 471–496. <https://doi.org/10.1093/jel/eqw026>
- Brisman, A., & South, N. (2018). *Green Criminology and Environmental Crimes and Harms*. October, 1–12. <https://doi.org/10.1111/soc4.12650>
- Colby Environmental Policy Group. (2011). *Environmental Policy Review 2011: Key Issues in Ethiopia*. 3–34. [http://web.colby.edu/eastafricaupdate/files/2012/01/Environmental-Policy-Review-2011\\_color\\_small.pdf](http://web.colby.edu/eastafricaupdate/files/2012/01/Environmental-Policy-Review-2011_color_small.pdf)
- Creswell, J. w. (2014). *Research Design: Qualitative, Quantitative and Mixed Methods Approaches*. SAGE publications Ltd.
- Dinh, T. M., & Nguyen, D. L (2020). Criminal law policy on environmental crimes in the context of sustainable development in Vietnam. *E3S Web of Conferences*, 175. <https://doi.org/10.1051/e3sconf/202017514004>
- Dorn, N., Daele, S. Van, & Beken, T. Vander. (2007). Reducing Vulnerabilities to Crime of the European Waste Management Industry: the Research Base and the Prospects for Policy. 23–36. <https://doi.org/10.1163/092895607X193524>
- EnviCrimeNet. (2016). *Report on Environmental Crime*. 1–52. [http://www.envicrimenet.eu/images/docs/envicrimenet\\_report\\_on\\_environmental\\_crime.pdf](http://www.envicrimenet.eu/images/docs/envicrimenet_report_on_environmental_crime.pdf)
- Faroque, S., & South, N (2020). Law-Enforcement Challenges, Responses and Collaborations Concerning Environmental Crimes and Harms in Bangladesh. *International Journal of Offender Therapy and Comparative Criminology*, 1–18. <https://doi.org/10.1177/0306624X20969938>
- Faroque, S., & South, N (2022). Law-Enforcement Challenges, Responses and Collaborations Concerning Environmental Crimes and Harms in Bangladesh. *International Journal of Offender Therapy and Comparative Criminology*, 66 (4), 389–406. <https://doi.org/10.1177/0306624X20969938>
- FDRE. (1997). Federal Democratic Republic of Ethiopia Environmental Policy In Collaboration With The Ministry of Economic Development And Cooperation.
- FDRE. (2004). The criminal code of the Federal Democratic Republic of Ethiopia Proclamation No.414/2004. 414.
- Gore, M. L., Braszak, P.et al. (2019). Transnational environmental crime threatens sustainable development.
- Hayman, G., & Brack, D (2002). International Environmental Crime The Nature And Control Of Workshop Report.
- Huisman, W., & Van Erp, J (2013). Opportunities for environmental crime: A test of situational crime prevention theory. *British Journal of Criminology*, 53 (6), 1178–1200. <https://doi.org/10.1093/bjc/azt036>
- INTERPOL. (2015). Directory of environmental law enforcement networks environmental security November 2015. November.
- Ivanovic, A. R (2014). Environmental crime as a factor of endangering national security. August.



- Lez'er, V Sevalnev, V Cherepanova, E., & Zhabskiy, V (2020). Measures of criminal law regulation of environmental crimes in the Tyumen City. *E3S Web of Conferences*, 164. <https://doi.org/10.1051/e3sconf/202016411030>
- Martini, M (2012). Environmental crime and corruption Types of the environmental criminal. *International, Transparency the Global Coalition against Corruption*, April. [www.transparency.org](http://www.transparency.org)
- Menbere, M. P (2019). Industrial Wastes and Their Management Challenges in Ethiopia. *Chemistry and Materials Research*, 1–6. <https://doi.org/10.7176/cmr/11-8-01>
- Mookiah, L., Eberle, W., & Siraj, A (2015). *Survey of Crime Analysis and Prediction*. 440–443.
- Mwebaza, R., Mwanika, P. N., & Wonndamagegnehu, W. S. (2009). Crimes in Ethiopia Situation Report Environmental crimes in Ethiopia. July.
- Nwazi, J (2022). An Evaluation Of Environmental Criminal Liability And Enforcement In Nigeria. 3, 323–343. <https://doi.org/10.3366/ajicl.2022.0412>
- Pavser, N (2004). Messages for Police Forces–Modules on Environmental Sustainability and Awareness Geared to European Police Forces. <https://www.ncjrs.gov/pdffiles1/nij/Mesko/207993.pdf>
- Rose, G. L (2011). Gaps in implementing Environmental Law at the National, Regional and Global Level. 30.
- Sally Stoecker and Ramziya Shakirova. (2014). *Environmental Crime and Corruption in Russia*.
- Stenton, A. E (2009). CRIME ANALYSIS: An Examination of Crime Prevention And Reduction Strategies By Project Submitted In Partial Fulfillment of The Requirements For The Degree Of In The.
- Tomkins, K & Tomkins, K (2018). Current Issues in Criminal Justice Police, Law Enforcement and the Environment Police, Law Enforcement and the Environment. 5329 (2005). <https://doi.org/10.1080/10345329.2005.12036326>
- UNEP. (2015). Waste Crimes, Waste Risks: Gaps and Challenges In the Waste Sector.
- UNEP. (2018). *The State of Knowledge of Crimes that have Serious Impacts on the Environment*. 110. <https://www.unep.org/resources/publication/state-knowledge-crimes-have-serious-impacts-environment>
- UNEP, & INTERPOL. (2016). The Rise of Environmental Crime-A Growing Threat To Natural Resources Peace, Development And Security.
- Van Rooij, B (2006). Implementation of Chinese environmental law: Regular enforcement and political campaigns. *Development and Change*, 37 (1), 57–74. <https://doi.org/10.1111/j.0012-155X.2006.00469.X>