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New Colonialism in An Ecological Guise: Waste Trade from Developed Countries to Developing Countries as A Form of Environmental Racism

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Waste trade from developed to developing countries reflects systemic environmental racism. Wealthy nations turn poorer nations into dumping grounds, creating structural injustice and geography-based discrimination. The concept of ecological colonialism reinforces this, highlighting environmental exploitation in colonized countries. Environmental issues and so-called "green" policies are often used by developed nations to impose dominance over the Global South. This is manifested in the exploitation of natural resources, dependency on debt and foreign loans, technological domination, and waste colonialism. Such practices demonstrate that environmental protection is prioritized only for the powerful, while marginalized communities are sacrificed, thereby reinforcing structural inequality and dependency. This study frames waste trade not as ordinary commerce but as a form of domination over developing countries, particularly in Asia and Africa. Using qualitative methods and secondary data collection, it presents a theoretical framework to explain how waste trade becomes a tool for developed nations to create structural dependency.

Keywords: *Toxic Colonialism, Global South, Global North, Waste Trade*

Introduction

Today, the strength and prosperity of nations cannot be separated from their achievements and activities in international trade (Adolf, 2016). Trading is a fundamental freedom that should not be hindered merely because countries embrace different economic systems, ideologies, or political structures (Adolf, 2015). Trade activities are now an essential aspect of global interaction, not only for fulfilling the demand for goods

and services but also for purposes such as market expansion, increased production, and enhancing a country's exchange value through exports.

International trade relations among states have existed for a long time, alongside the emergence of the nation-state as the foundation of modern statehood. The pursuit of independence and control over the global economy has driven countries to establish stable and organized trade relations with others. Awareness of the importance of trade as a key instrument for stimulating economic growth and development has become the fundamental reason behind the establishment of such economic relations (Muhamad Iqbal & Andayani, 2024).

In general, international trade examines the foundations of trade as well as the benefits gained by countries, particularly through export and import activities. Within neoclassical theory, international trade is viewed as providing significant advantages for building a nation's economy. Nevertheless, such activities also raise concerns, as international trade is often associated with environmental degradation, especially in developing countries (Supriyanti, 2022).

The link between international trade and the environment was formally recognized at the World Summit on Sustainable Development (WSSD) in 2002. The summit produced two key agreements: first, to strengthen the mutually reinforcing relationship between trade, the environment, and development in pursuit of sustainable development; and second, to promote synergies between the multilateral trading system and the objectives of sustainable development (Widyastuti, 2023). Differences in interests between developed and developing countries are evident in the regulation of environmental issues within international trade. From an economic standpoint, there is no shared perception within the international community regarding the importance of environmental protection. Trade, which was once limited to small-scale transactions between sellers and buyers, has expanded into cross-border activities (Widyastuti, 2023).

In the modern era, trade is no longer confined to primary commodities such as food or energy but has extended to include waste as a legitimate commodity in international trade. Developed countries integrate waste exports to developing nations as a dual strategy: reducing domestic management costs while simultaneously generating state revenue. This demonstrates how waste, which should be a domestic responsibility, has been transformed into a global economic instrument, where waste flows from countries with strict regulations and high processing costs toward markets offering looser regulations and lower expenses (Rossi & Morone, 2023).

The international waste trade has become a pressing environmental issue in the modern era. Developed countries, which generate vast amounts of waste due to rapid cycles of consumerism, often choose to export this waste to developing countries where regulations are more lenient and processing costs are lower. This practice reflects the phenomenon of "toxic colonialism" or waste colonialism, in which developed nations shift the burden of pollution onto countries less capable of managing it safely (Wahyudi et al., 2020).

As a result, importing countries—often in Asia and Africa—face severe environmental degradation, ranging from contaminated soil and water to serious public health impacts in areas where informal processing takes place. Although international agreements such as the Basel and Bamako Conventions aim to restrict the transboundary movement of hazardous waste, regulatory loopholes and weak enforcement allow such practices to persist. Against this backdrop of inequality, global cooperation and investment in environmentally sound waste management technologies are urgently needed, ensuring that electronic waste becomes a shared challenge addressed in a fair and sustainable manner (Priyono, 2018).

The phenomenon of waste trade from developed to developing countries not only reflects global economic inequality but also reveals a systemic form of environmental racism. In this context, low-income nations with vulnerable populations are often turned into "global dumping grounds" by wealthy countries unwilling to bear the ecological burden of their own consumption and production. Communities in Africa, South Asia, and Latin America continue to suffer the consequences of exposure to hazardous waste, while waste-producing nations evade responsibility. This structural injustice must therefore be understood as a form of discrimination based on geography and race. As Pellow, cited in (Okereke, 2010) argues, environmental racism reflects the way the global system prioritizes environmental protection and public health only for groups with political and economic power, while sacrificing marginalized communities. This reality demands an environmental justice approach that goes beyond ecological concerns to also encompass human rights and the principles of global equality.

The research method used in this paper is qualitative. Qualitative research methods are used to understand and explain social reality from the perspective of actors, the meaning of a context, and a description of the process of formation of social reality. Qualitative methods focus on an in-depth understanding of a phenomenon through descriptive data such as journals, the internet, books, and other relevant sources. Qualitative refers to the postpositivist paradigm, which means that social sciences differ

from natural sciences, and therefore, their treatment must be differentiated (Afrizal, 2019).

To conduct analysis, the researcher, as the research instrument, seeks and processes data from field observations, documents, interviews, documentation, etc. However, in this study, the researcher focused on secondary data, particularly document analysis, so data was obtained from various documentary sources. Data was categorized, synthesized, broken down into units, organized into patterns, and sorted out the important points to make the data easier to understand. Data was not converted into numbers, as it is conceptual in nature and addresses a problem (Elvera & Astarina, 2021). According to Bowen, document analysis is a procedure for reviewing and evaluating documents in various forms, both electronic and manual, and can be in the form of agendas, meeting notes, articles, books, brochures, journals, letters, maps, diagrams, press releases, organizational reports, etc (Bowen, 2009).

Analytical Framework

The Concept of Ecological Colonialism in the Dynamics of Global Waste Trade

Ecological colonialism is a theoretical discourse that highlights how colonial practices did not only exploit local people and cultures but also colonized, controlled, and damaged the environment in colonized countries. In his book Ecological Imperialism, Alfred W. Crosby asserts that European domination over new territories was not only grounded in political and military power but also advanced through the transfer of foreign organisms—including diseases, plants, and animals—that devastated local ecosystems while benefiting immigrant settlers (Rice & Stapleton, 1989).

Scholarly works such as Climate Change as Ecological Colonialism emphasize that modern climate injustice is an extension of colonial relations. Developing countries become victims of industrial activity and excessive consumption by powerful nations, expanding what is termed the global "ecological debt." This principle aligns with the theory of Ecologically Unequal Exchange, which describes the asymmetrical flow of resources from the South to the North, while the ecological consequences are disproportionately borne by developing countries (Pérez-Sánchez et al., 2021)

Ecological imperialism thus represents a form of domination and colonization exercised by colonial powers, particularly from the West, through the alteration and imposition of ecological systems, control of the environment, and patterns of natural resource management in colonized territories. This transformation of the environment

has persisted from the colonial era into the present, manifesting in globalization and modern conservation. The process occurred alongside physical colonialism—such as land occupation—but also involved the importation of foreign animal and plant species, the destruction of local ecosystems, and the displacement or replacement of Indigenous ecological knowledge with Western scientific or industrial approaches. These practices have led to ecological degradation, the marginalization of local cultures, and socio-ecological inequality between wealthy and poor nations (Gibbs et al., 2021).

Furthermore, (Cheng, 2007) describes the practice of shipping electronic waste (e-waste) from developed countries to China as a form of ecological colonialism, whereby "First World capital" exports toxic waste for economic gain while shielding its industries from strict regulations. The term "toxic colonialism" was introduced by Greenpeace in 1992 to describe the export of hazardous waste from developed to developing countries, focusing on the inequality of waste production in which developing nations are rendered "global dumping grounds" (Cheng, 2007).

Neocolonialism has since emerged in the form of what is referred to as ecological or green imperialism. This form of domination occurs when developed countries deploy environmental issues and "green" policies as instruments to maintain control over developing nations. Its practices are evident in unequal trade relations, dependency on debt and foreign aid, cultural imperialism, natural resource exploitation, involvement in conflicts or proxy wars, digital colonialism, and most prominently, waste colonialism. Through these mechanisms, powerful nations continue to assert dominance over less influential countries, perpetuating cycles of structural dependency and global injustice—even within discourses that ostensibly promote environmental concern (Serwatka, 2024)

Legal Instruments Governing the Global Waste Trade

The transboundary trade of waste has become an increasingly complex global issue alongside the rising volume of waste generated by modern industrial activities and consumer behavior. In addressing the environmental, health, and social impacts of waste trade, the international community has developed a range of legal instruments to regulate and control such practices. International legal frameworks are designed to create fair and sustainable mechanisms while preventing exploitation and the transfer of pollution burdens from developed to developing countries.

The 1989 Basel Convention serves as the primary instrument governing the trade and management of hazardous waste, requiring the prior informed consent of importing

countries before waste can be shipped. In addition, various regional agreements and national policies further reinforce the existing legal framework. However, despite the existence of relatively comprehensive regulations, implementation and enforcement remain challenging, particularly in closing legal loopholes and addressing illegal practices that disproportionately harm countries with limited waste management capacity.

The Basel Convention (1989) regulates the international trade of waste. The types of waste traded in this context include recyclable waste (such as plastic food packaging, paper, plastic beverage bottles, cardboard, and so forth), and not hazardous waste. According to Article 4 of the Basel Convention, waste may only be traded if the exporting country is no longer able to manage it domestically, and the recycling industry in the importing country must be capable of processing such waste further. Furthermore, Article 6 stipulates that waste trade can only occur if the exporting country has provided prior notification to the importing country. Provisions regarding waste trade are also included in Article 9, which declares that any waste trade activity conducted without the consent of either party is prohibited (Yahya & Simatupang, 2024).

The primary objective of this convention is that hazardous waste should be recycled or disposed of as close as possible to the location where it is generated. Furthermore, the Basel Amendment prohibits the transfer of hazardous waste from developed to developing countries. Even in limited situations where the transboundary movement of hazardous waste is permitted (between developed countries), it must comply with the provisions of the agreement, including the requirement of prior informed consent from the receiving country. The facts outlined above, together with perspectives in international law as reflected in the Basel Convention, demonstrate the need for rational trade restrictions in international commerce, particularly when such trade clearly creates loopholes for the transfer of waste to developing countries in violation of the Basel Convention. Although the Basel framework prohibits transboundary transfers to developing countries, the absence of an effective enforcement mechanism remains a major weakness that perpetuates the problem of waste shipments to developing countries (Christian, 2017).

Countries around the world are increasingly recognizing the challenges associated with electronic waste (e-waste) and have begun introducing domestic policies, laws, or regulations to govern its management. In 2014, only 44% of the global population was covered by legal frameworks related to waste; this figure rose to 66% in 2017, and by October 2019 had reached 71%, encompassing 78 countries. In Africa, the convention regulating electronic waste is the Bamako Convention. To support the

objectives of the Basel Convention (Article 11), this convention encourages parties to establish regional, multilateral, and/or bilateral agreements concerning hazardous waste, which subsequently led to the adoption of the Bamako Convention in 1998. This is an intergovernmental agreement among African states that prohibits the import of all forms of hazardous waste, aiming to reduce and manage the transportation of e-waste both domestically and across borders within Africa. Theoretically, it seeks to ensure that the disposal of electronic devices is carried out in accordance with principles of clean and environmentally sound management (Maes & Preston-Whyte, 2022).

The Bamako Convention comprehensively regulates the transboundary movement of hazardous waste through several key articles that establish an international legal framework for African states. Article 2 sets out the definition of hazardous waste and the scope of substances covered under the convention, while Article 3 requires each party to submit its national definition of hazardous waste to the Secretariat within six months of ratification. Furthermore, Article 4 imposes a strict prohibition on the import of hazardous waste from non-member states, classifying such activities as illegal and criminal. This article also regulates the prohibition of waste dumping at sea and obliges states to manage waste in an environmentally sound manner within their respective jurisdictions.

To ensure the implementation of the convention, Article 5 requires each party state to designate competent authorities, including a national focal point and domestic supervisors. Notification and consent procedures are set out in Article 6, under which any planned waste shipment must obtain the written approval of both the receiving and the transit states through a prior informed consent scheme, accompanied by a waste management contract that meets environmental standards. Article 7 stipulates that if waste passes through a non-party state, the same procedural requirements must still be followed. Should a shipment fail or be improperly managed, Article 8 obliges the exporting state to take back the waste within a maximum of 90 days. Finally, Article 9 provides a detailed definition of illegal traffic in waste, such as shipments made without notification, the use of falsified documents, or disposal contrary to the law. Parties are required to impose sufficiently severe criminal penalties to create a deterrent effect, and they remain responsible for re-importing the waste within 30 days if a violation occurs. With this legal framework, the Bamako Convention serves as a vital instrument in protecting African states from the negative impacts of the international trade in hazardous waste (United Nations Environment Programme, 2024).

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Discussion

Waste Trade and the Practice of Global Environmental Racism

From an economic perspective, the waste trade can offer benefits to both types of countries. Developed nations gain from the lower disposal costs in developing countries while also avoiding growing domestic opposition to hazardous waste disposal facilities. At the same time, developing countries gain access to inexpensive raw materials through waste recycling, which can stimulate increased production and employment. At first glance, this appears to be a mutually beneficial arrangement (a win-win solution). However, many of the importing countries are heavily indebted and have a poor track record in waste management and environmental performance. Moreover, as revealed in several major cases, this situation is further exacerbated by the illegal trade in hazardous waste and its indiscriminate dumping in developing countries (Martínez et al., 2022).

Globalization has made the world increasingly complex under the banner of a borderless world. States are bound together by diverse interests, with knowledge transfer and technology exchange becoming ever more accessible. Alongside these developments, issues such as democracy and human rights (HR), gender, labor, free markets, and the natural environment have emerged. The first four issues—democracy and human rights, gender, labor, and free markets—significantly influence the last, namely the environment. These issues have heightened human awareness of their rights. Yet, particularly in the case of free markets, they have also driven humanity to exploit nature more aggressively. The free market compels states to compete in accelerating economic growth (Budiyanti, 2017). Globally, developed countries export hazardous waste to developing countries with weak regulations, reflecting a form of global environmental racism. Developed countries frequently export hazardous waste—such as e-waste, plastics, and industrial residues—to developing nations with lax environmental standards and lower disposal costs.

This practice is known as toxic colonialism and represents a concrete form of global environmental racism, as vulnerable communities in the Global South become dumping grounds for hazardous waste. Studies in the Gulf of Guinea (Côte d'Ivoire, Nigeria, Ghana) have found that toxic waste is processed informally through unsafe methods, endangering both local health and the environment, and is explicitly categorized as environmental racism (Okafor-Yarwood & Adewumi, 2020). In areas such as Agbogbloshie (Ghana), informal electronic recycling involves burning wires and plastics without protection, leading to soil, air, and water contamination with toxic substances such as lead, mercury, and dioxins—placing workers and children at extreme

health risks. This constitutes a direct consequence of environmental racism, as local communities bear the burden of pollution from global waste (Jorgenson, 2009).

Table – Waste Trade from Global North to Global South

No	Type of Waste	Estimated Annual Volume	Country of Origin (Global North)	Destination Country (Global South)	Key Notes
1	Plastic	~3–3.5 million tons (2022–2023)	United States, United Kingdom, Japan, Germany, Netherlands, Australia	Malaysia, Indonesia, Vietnam, the Philippines, Turkey, India	After the 2017 "China Ban," large volumes were redirected to Southeast Asia. Many containers were found to be non-recyclable.
2	Paper & Cardboard	~2.44 million tons (ASEAN from EU); 4.9 million tons (EU, 2022)	European Union, United Kingdom	Indonesia, Malaysia, Vietnam, India	76% of EU waste exports to ASEAN consist of paper. Accepted to support local pulp and paper industries.
3	Ferrous Metals (Iron/ Steel)	~19.5 million tons (EU, 2022)	European Union	Turkey (10.7 million tons), India, Southeast Asia	Turkey receives over 60% of the EU's iron exports; used for recycled steel industries.
4	Non-Ferrous Metals	~2.1 million tons (aluminum/copper, EU)	European Union, Japan	ASEAN, India	Includes HS 7404 (copper) & HS 7602 (aluminum); high in value but often contaminated during informal processing.
5	Textiles / Used Clothing	~1.5 million tons (EU), 60,000 tons/year to Chile	United Kingdom, United States, China, European Union	Africa (Kenya, Ghana), the Philippines, Chile	Large quantities are illegally dumped; harm local industries and the environment (e.g., Atacama Desert, Chile).
6	Electronic Waste (E-Waste)	~3.3–5 million tons transboundary (2022)	United States, United Kingdom, Germany, Netherlands, European Union	Ghana, Nigeria, Pakistan, India, Thailand	Often disguised as second-hand goods; causes severe health and environmental crises in recipient countries.

7	Clinical / Medical Waste	4.3 million tons → developing; 25,500 tons → least developed (2021)	G7 & OECD countries	Africa, South and Southeast Asia	High-risk waste: contains infectious, chemical, and radioactive materials.
8	Household Waste	52,000 tons → developing countries; 15,300 tons → LDCs	United States, European Union	Africa, Southeast Asia, Latin America	Often mixed with hazardous waste; difficult to manage safely.
9	Used Lead-Acid Batteries	~20 million units/year from the U.S. to Mexico	United States	Mexico	Exported for informal lead recycling; poses serious health and environmental risks.

Source: Processed research data, 2025

Transboundary waste trade, as illustrated in the table above, reflects the complex dynamics between the economic interests of developed countries and the structural limitations of developing countries. A striking example is plastic waste, which—since China's 2017 import ban (known as the China Ban)—has diverted millions of tons of plastic waste to Southeast Asia, including Indonesia, Malaysia, and the Philippines. Much of this waste cannot be recycled and instead places enormous pressure on local waste management capacities, generating pollution and ecological degradation. This situation highlights the pattern of environmental cost externalization by the Global North onto the Global South.

Unlike plastic waste, the export of paper and cardboard from the European Union and the United Kingdom to ASEAN countries such as Indonesia and Vietnam is generally welcomed to support local pulp and paper industries. This demonstrates that not all waste trade is harmful; some carries economic value and is relatively safe when conducted under strict quality regulations and oversight. Nevertheless, risks remain when paper waste is contaminated with other materials that may disrupt the recycling process. Metal waste—both ferrous (such as iron) and non-ferrous (such as aluminum and copper)—is a highly sought-after commodity for industries in developing countries. The European Union, for example, exports nearly 20 million tons of ferrous metals, more than 60 percent of which are destined for Turkey. These materials are processed into recycled steel for the construction and manufacturing industries. Despite their high economic value, the informal handling of metal waste, as occurs in some Asian countries, poses significant risks of environmental contamination and endangers workers' health.

Used clothing or textile waste represents another form of waste that raises both social and ecological concerns. The United Kingdom, the United States, and the European Union export more than one million tons of second-hand clothing each year to Africa and Latin America. Much of this clothing is unwearable, ending up either illegally dumped or piling up in open natural environments, as seen in Chile's Atacama Desert. The consequences include disruption to local textile industries and pollution caused by non-biodegradable waste. Electronic waste (e-waste) is among the most hazardous types of waste exported from the Global North to countries such as Ghana, Nigeria, India, and Pakistan. In many cases, this waste is disguised as second-hand goods or technology donations. Electronic waste contains toxic substances such as lead, mercury, and cadmium. Recipient countries lacking appropriate recycling facilities face serious risks to public health and environmental safety, especially when metal recovery is carried out through informal processes.

Equally concerning is the trade in clinical or medical waste. G7 and OECD countries export millions of tons of medical waste to developing and least-developed countries. Such waste often contains infectious materials, toxic chemicals, and even radioactive substances. Recipient states frequently lack the infrastructure and facilities to manage this waste safely, thereby creating severe public health risks and exposing profound ethical inequalities in the global distribution of environmental hazards. Household waste shipments to developing countries, though seemingly smaller in volume, are often mixed with hazardous materials. Without effective sorting systems and infrastructure, this type of waste is difficult to manage. Irregularities in documentation and shipping further increase the potential for misuse, particularly when waste is disguised as "donations" or humanitarian aid.

Used batteries—particularly lead–acid batteries exported from the United States to Mexico—illustrate the harmful practice of transboundary pollution transfer. In Mexico, these batteries are often processed informally without adequate environmental safeguards or occupational safety measures. As a result, local communities suffer from chronic lead exposure, which increases the risk of neurological disorders and hampers children's development. The theoretical framework of ecologically unequal exchange explains how wealthy nations displace environmental burdens onto poorer nations: recipient countries supply raw materials and serve as ecological sinks (waste dumping grounds), while exporting countries reap the economic gains and ecological advantages. This dynamic constitutes a form of environmental racism on a global scale, as developing

countries bear the disproportionate burden of waste and ecological degradation (Jorgenson, 2009).

Certain types of waste offer socio-economic benefits to specific communities. Nevertheless, utilizing waste as a raw material can result in significant health and environmental risks. (Hashmi et al., 2024) found that soils in several provinces of Pakistan are contaminated with electronic waste. (Dodd et al., 2023) reported that Ghana faces contamination from both non-carcinogenic and carcinogenic substances at concentrations exceeding safe soil quality thresholds. Furthermore, the study indicated that Accra, Ghana, a major e-waste dumping site, experiences metal contamination in humans. In Indonesia, imported paper and plastic waste is recycled into value-added products; however, this waste is frequently contaminated with hazardous and toxic materials (B3).

According to the Central Statistics Agency (BPS), plastic waste imports increased to 99,754 tons in 2019, representing a 4 percent rise since 2016. The primary sources of these imports were the United States, Australia, Japan, and Singapore. In the same period, paper waste imports reached 3.18 million tons, a 57 percent increase from 2016, with approximately 67 percent entering through Tanjung Priok and 28 percent processed by paper mills in East Java. The phenomenon of plastic and paper waste imports into Indonesia is not only an economic and legal issue but also has serious consequences for public health and local ecosystems. A study conducted by Ecoton and GAIA (2021) in (Hartono et al., 2021), in Sidoarjo and Gresik areas of East Java, showed that the burning of imported plastic waste at informal recycling facilities produces dioxin emissions and microplastic particles that pollute the air and groundwater.

At the community level, residents living near waste processing sites reported increased cases of upper respiratory tract infections (URTIs), skin irritation, and digestive disorders due to direct exposure to combustion smoke and liquid waste from recycling activities. Washing used plastic with river water also contributes to declining water quality, the death of river biota, and increased microplastic content in drinking water. Ecologically, the import of unsorted waste also accelerates soil and water degradation, particularly in small industrial areas lacking adequate waste treatment facilities. Non-recyclable plastic waste is dumped in open areas, resulting in toxic residues that persist in the environment. The long-term impacts include reduced agricultural productivity, threats to biodiversity, and the accumulation of hazardous chemicals in the human food chain. Thus, the Indonesian case illustrates that the transboundary movement of waste is

not merely an administrative issue but has direct implications for public health and environmental sustainability (Hartono et al., 2021).

In response to this global environmental racism, the theory of ecological debt has evolved alongside ecologically unequal exchange to demand ecological accountability and reparations for Global South countries. This concept calls for recognition of historical ecological debts—long unacknowledged within frameworks of global justice—and advocates for a redistribution of ecological costs and benefits (Warlenius, 2016). Moreover, environmental racism, as Curtin emphasizes, highlights the interconnectedness of racial and environmental oppression, with one reinforcing and sustaining the other. Discriminatory environmental practices targeting socially or economically marginalized communities represent a concrete manifestation of environmental racism. This includes the export of waste from developed to developing countries and the exploitation of natural resources (Prabawati & Sudibyo, 2023).

From the overall pattern of waste trade, it is evident that developed countries tend to shift their pollution burden onto Global South countries, which have weaker regulatory systems and waste management infrastructure. This practice not only generates global environmental inequality but also perpetuates a new form of environmental colonialism. Therefore, stronger enforcement of international law is required through instruments such as the Basel Convention, alongside the enhancement of technical capacities in developing countries and the implementation of Extended Producer Responsibility. Without firm and collaborative policy interventions, cross-border waste trade will continue to place vulnerable groups as the victims of a global environmental crisis driven by excessive consumption in developed countries.

Structural Injustice in Environmental Racism

The practice of transboundary waste trade reflects unequal global structures and underscores the phenomenon known as global environmental racism. At the global level, environmental racism is not merely about discrimination based on race or ethnicity, but rather a form of structural injustice in which the burden of pollution and ecological risks is shifted from wealthy countries (the Global North) to poorer or developing countries (the Global South), which have historically been marginalized within the global politico-economic system. One prominent illustration is the sharp increase in plastic waste flows to Southeast Asia following the 2017 "China Ban."

In China, the 2017 National Sword policy drastically reduced China's waste import margins, leading to a significant decline in the volume of plastic and waste paper imports. The developed countries (the US, EU, Japan) shifted their waste exports to Southeast Asian countries (Malaysia, Vietnam, and Indonesia). This shift marked China's transformation from a major importer to a player tightening waste quality standards and, later, to an exporter of high-value recyclable materials. The authors emphasize that these policy changes not only impacted global trade flows but also altered economic incentives and waste production patterns internationally, posing new challenges for recipient countries in the Global South that were unprepared for the surge in waste imports following China's ban (Li & Mu, 2024).

When China refused to serve as the world's primary dumping ground, countries such as Indonesia, Malaysia, and the Philippines became new targets. Large volumes of non-recyclable plastic overwhelmed local infrastructure and triggered pollution. In this context, such practices exemplify environmental racism, as Global South countries are positioned as "sacrifice zones" — places designated to absorb waste deemed unfit to be handled by developed countries themselves. Although certain types of waste trade, such as exports of paper and metals, are often considered economically beneficial, they nonetheless carry risks of inequality. When waste is mixed with contaminants or managed informally, as in the case of non-ferrous metals and used batteries, the dangers increase drastically. Informal processing without adequate health and safety standards exposes local communities — the majority of whom come from low-income groups — to hazardous toxins. This constitutes a concrete form of environmental risk externalization along geographic and economic lines, with profound moral and ethical implications.

Textile and electronic waste also stand as powerful symbols of global ecological inequality. The shipment of second-hand clothing to Africa and Latin America—much of which is unwearable—not only causes visual and biological pollution but also undermines local industries and deepens dependence on consumption from developed countries. A similar dynamic occurs with electronic waste, often disguised as technology donations. Behind the narrative of "digital empowerment" lies the reality that Global South countries become victims of exposure to toxic substances such as mercury and lead—without adequate processing infrastructure. This reveals how the rhetoric of aid and global trade can obscure structural injustice that is, in essence, exploitation.

Medical waste, household waste, and used batteries illustrate the most extreme dimensions of global environmental racism. Wealthy countries, equipped with advanced

healthcare systems and high recycling capacities, instead divert their hazardous waste to nations with the least capacity—including those classified as Least Developed Countries (LDCs). This is not merely a technical imbalance but rather a separation of human value based on geography and economic power: the lives and health of people in the Global South are treated as if they were worth less, deemed able to bear risks that would never be tolerated in Global North societies.

This overall pattern demonstrates that waste trade is not merely a matter of economics or logistics, but rather an extension of ecological colonialism and systemic racism at the global level. The Global South is rendered a dumping ground for risk, while the Global North reaps the benefits of the consumption and production systems it dominates. Addressing this crisis requires more than technical or market-based approaches. What is needed is a paradigmatic shift that foregrounds global environmental justice, the strengthening of international agreements such as the Basel Convention, and profound reform of consumption patterns and producer responsibility through legally binding Extended Producer Responsibility (EPR) schemes. Without such structural transformation, waste trade will continue to reproduce new forms of discrimination and global injustice rooted in colonial legacies and international economic inequality.

Developing Countries' Resistance Through Environmental Legal Regimes

While cross-border waste trade is frequently condemned as evidence of environmental inequality between the Global North and South, internal dynamics within recipient countries are also crucial in sustaining this activity. Ineffective governance, corruption, and dependence on the informal recycling sector enable foreign waste to enter, even in the face of import bans. For instance, in Indonesia, inadequate waste management infrastructure and the economic incentives associated with informal recycling have allowed plastic waste imports to persist, despite the implementation of several national policies (Zahrah et al., 2024).

The global e-waste trade is shaped by a complex interaction between domestic conditions in recipient countries and external pressures from exporters. In many developing nations, weak environmental oversight, corruption, and reliance on informal sectors allow waste to enter disguised as secondhand goods. For some urban poor, collecting and recycling e-waste provides essential income, despite significant health and safety risks. This creates an unregulated shadow economy that perpetuates illegal waste

imports. Additionally, local demand for inexpensive raw materials encourages waste acceptance, while limited institutional capacity renders international agreements like the Basel Convention ineffective at the national level.

At the same time, developed countries are motivated to export e-waste by economic, regulatory, and political factors. High domestic waste management costs and strict environmental regulations prompt these nations to channel waste through developing countries with laxer standards. They often exploit legal loopholes by labeling waste as "refurbished" or "reusable," making these exports appear legitimate. This practice highlights a new form of global inequality, concentrating economic and technological benefits in the Global North while shifting environmental and health risks to the Global South. Consequently, the e-waste trade is best understood not as simple exploitation, but as the outcome of structural interactions between global and local interests in an unequal international system (Murthy & Ramakrishna, 2022). These findings underscore the importance of including domestic political-economic factors—such as local business interests and weak bureaucratic practices—when analyzing the global waste trade. This approach offers a fuller understanding of the reciprocal relationship between waste exports from developed countries and their reception in developing nations (Idris et al., 2024).

The cross-border waste trade, laden with structural inequalities, demands a legal response that is firmer, more progressive, and grounded in justice. The Basel Convention serves as the primary instrument for regulating the transboundary movement of hazardous waste, built upon the principle of prior informed consent (PIC), which requires the approval of the receiving country before waste can be shipped. However, the limitations of the Basel Convention—including the fact that major powers such as the United States have yet to ratify it, along with weak enforcement and sanctioning mechanisms—leave ample room for the exploitation of the Global South through legal loopholes and false waste classifications. In the context of global environmental racism and ecological colonialism, such weaknesses reinforce exploitative relations that perpetuate inequality.

For this reason, juridical strengthening is necessary through additional protocols such as the 2019 Basel Amendment (which restricts plastic waste exports), as well as the adoption of binding principles of international legal responsibility for actors involved in illegal dumping. At the same time, the Bamako Convention—initiated by African nations as a form of resistance to Basel's shortcomings—illustrates the importance of legal instruments that actively represent the interests of the Global South. Achieving global ecological justice thus requires harmonization among multilateral agreements, regional

provisions, and national laws, while simultaneously advancing binding (not voluntary) obligations for Global North states under Extended Producer Responsibility (EPR). Within the framework of international law, this struggle is not only about protecting the environment, but also about upholding the principles of non-discrimination, sovereign equality, and the right to a clean and healthy environment as an integral part of human rights.

In the context of transboundary waste trade, the state holds a central role as a subject of international law with responsibility for regulating, monitoring, and enforcing rules on the movement of both hazardous and non-hazardous waste. As the primary actors in ratifying and implementing international legal provisions, states bear legal responsibility for waste export and import activities. On the positive side, several countries have demonstrated their commitment to environmental protection by adopting national policies aligned with the Basel and Bamako Conventions. Countries such as Nigeria, Indonesia, and Malaysia, for instance, have developed domestic regulations to prohibit or restrict waste imports—particularly high-risk electronic and plastic waste. In this regard, states apply the precautionary principle and the requirement of prior informed consent as stipulated in Article 6 of the Basel Convention. Furthermore, African Union member states established the Bamako Convention as a regional expression of solidarity, rejecting all forms of hazardous waste imports from outside Africa, as enshrined in Article 4 of the convention.

Nevertheless, the role of states is not free from negative dimensions, revealing structural and political weaknesses. The European Union (EU) demonstrates significant gap among these countries in terms of innovation and effectiveness of waste management. Countries like Germany, Sweden, and the Netherlands are considered "high performers" due to their high adoption of advanced recycling technologies, strong policy support, and broad public participation. In contrast, Eastern European countries like Bulgaria and Romania continue to face challenges such as limited infrastructure, limited public awareness, and weak financial support for environmental innovation. Consequently, countries with high capacity tend to export low-value waste (which is uneconomical for domestic processing), while countries with low capacity often serve as transit points or recipients of waste from neighboring EU countries. This creates an internal pattern within the European Union where waste trade also occurs intra-regionally, not just between the Global North and South. This analysis emphasizes that variations reflect structural gaps in institutional and technological capacity between EU member states, necessitating greater

adaptation of common EU-level policies to individual national circumstances (Laureti et al., 2024).

In developed countries such as the United States, the United Kingdom, and some European Union members, large-scale waste exports continue despite bans or restrictions under the Basel Amendment, which prohibits hazardous waste exports. Legal loopholes are often exploited by disguising waste as second-hand goods, particularly in the case of electronic waste (e-waste), where a clear distinction between genuinely reusable products and obsolete items remains difficult to enforce. This exposes a fundamental shortcoming of the Basel Convention, which does not yet provide detailed regulation to differentiate between the two. On the other hand, receiving countries in the Global South often lack adequate infrastructure or monitoring capacity, thereby becoming dumping grounds for illegal waste—ranging from plastics and e-waste to second-hand textiles and medical waste. West African states such as Ghana and Nigeria, for example, remain major destinations for e-waste dumping, with severe consequences for human health and the environment, despite their ratification of the relevant international agreements.

The imbalance between the capacities of waste-exporting and waste-receiving countries reflects the structural inequalities embedded in the global waste trade. Although states, as subjects of international law, formally possess equal rights and obligations, in practice developed countries often dominate waste flows, while developing countries bear the heaviest impacts. Legal instruments such as the Basel and Bamako Conventions were originally designed to regulate, restrict, or even prohibit such practices in the pursuit of environmental justice. However, the effectiveness of these conventions largely depends on political commitment, enforcement capacity, and inter-state cooperation. For this reason, updating the international legal framework to make it more adaptive, alongside strengthening the institutional capacity of developing countries, is essential to ensure waste management that is fair, sustainable, and non-discriminatory.

Conclusion

Developed countries often exploit environmental issues and “green” policies to maintain their dominance over the Global South. The phenomenon of waste colonialism reflects how environmental protection priorities often favor the powerful, while marginalized communities become the primary victims—thus reinforcing structural inequality and dependency. The trade of waste from the Global North to the Global South

represents a form of ecological colonialism and systemic environmental racism. This practice turns countries in Asia and Africa into "global dumping grounds," where wealthy nations shift the ecological burden created by their own consumption and production patterns.

Seemingly progressive environmental issues and "green" policies are often strategically employed by developed countries to create new relations of domination and dependency over developing nations. This phenomenon, known as toxic colonialism, not only results in severe environmental degradation and health crises in recipient countries but also exposes structural injustice, where environmental protection is prioritized only for those with power and resources. Thus, waste trade is not merely an economic transaction but an instrument of domination that perpetuates global inequality.

In response to such exploitative practices, the international community has developed various legal instruments, with the Basel Convention (1989) serving as the main framework for regulating the transboundary movement of hazardous waste. However, regulatory loopholes and weak enforcement mechanisms have allowed these practices to persist. As a form of resistance and correction to the weaknesses of the Basel Convention, African countries initiated the Bamako Convention (1998), which explicitly prohibits the import of all types of hazardous waste into Africa. Despite the existence of these two legal frameworks, their effectiveness depends heavily on the political commitment and enforcement capacity of each country. Therefore, it is crucial to strengthen binding international legal instruments, enhance the technical capacity of developing countries, and implement effective Extended Producer Responsibility (EPR) principles to achieve a fair, sustainable, and ecologically just global trade system.

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