

Dirty Dollars: Profits Over Planet in Indonesia's Application of the Polluter Pays Principle

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Abstract

This paper critically examines Indonesia's application of the Polluter Pays Principle (PPP), revealing a troubling trend where economic interests often trump environmental responsibility. Through an in-depth analysis of case studies and regulatory frameworks, it exposes instances where corporations prioritize profits at the expense of environmental protection, exploiting regulatory loopholes and evading accountability for pollution. Drawing attention to the inherent tensions between economic development and environmental sustainability, the paper highlights the inadequacies in Indonesia's enforcement of the PPP. It scrutinizes the role of government agencies, industry actors, and civil society in perpetuating this profit-driven paradigm, shedding light on the challenges faced by environmental advocates in holding polluters accountable. Furthermore, the paper interrogates the implications of prioritizing profits over the planet, including the degradation of ecosystems, loss of biodiversity, and adverse impacts on public health and livelihoods. It underscores the urgent



need for systemic reforms to align Indonesia's economic agenda with environmental imperatives, promoting a more balanced approach that prioritizes the planet alongside profits. In conclusion, the paper calls for a paradigm shift in Indonesia's application of the PPP, emphasizing the importance of robust regulations, transparent enforcement mechanisms, and corporate accountability measures. It advocates for a holistic approach that integrates environmental considerations into economic decision-making processes, safeguarding Indonesia's natural heritage for future generations while ensuring sustainable development and prosperity.

KEYWORDS *Polluter Pays Principle, Environmental Protection, Environmental Justice, Environmental Policy*

Introduction

In recent decades, the global discourse on environmental protection has intensified, with nations grappling to strike a delicate balance between economic prosperity and ecological sustainability. Central to this discourse is the Polluter Pays Principle (PPP), a fundamental tenet of environmental law that posits that those who pollute should bear the costs of managing and mitigating that pollution. While theoretically sound, the practical application of the PPP often reveals a stark reality: profits frequently outweigh environmental concerns.¹

Nowhere is this tension more pronounced than in the archipelagic nation of Indonesia, where rapid industrialization and economic development have collided with the imperative to safeguard its rich biodiversity and fragile ecosystems.² This paper delves into Indonesia's

¹ Luppi, Barbara, Francesco Parisi, and Shruti Rajagopalan. "The rise and fall of the polluter-pays principle in developing countries." *International Review of Law and Economics* 32.1 (2012): 135-144; Ambec, Stefan, and Lars Ehlers. "Regulation via the Polluter-pays Principle." *The Economic Journal* 126.593 (2016): 884-906.

² Obidzinski, Krystof, and Ahmad Dermawan. "Pulp industry and environment in Indonesia: is there sustainable future?." *Regional Environmental Change* 12 (2012): 961-966; MacAndrews, Colin. "Politics of the Environment in Indonesia." *Asian Survey* 34.4 (1994): 369-380.

application of the Polluter Pays Principle, examining how the pursuit of profits has often taken precedence over environmental stewardship.

In the further context, natural resources were often regarded as free inputs in economic activities, their exploitation unhindered by considerations of sustainability. Forests, seas, and various mineral deposits were perceived merely as commodities ripe for exploitation, with little regard for the long-term carrying capacity of the environment. This mindset prevailed, perpetuating a narrative of unchecked resource extraction and environmental degradation.³

The degradation of the environment is primarily attributable to humanity's voracious exploitation of natural resources. While these resources are ostensibly intended for human welfare, their unbridled utilization has precipitated widespread environmental deterioration, imperiling both ecological equilibrium and human well-being.⁴

In response to this pressing challenge, nations participating in various international forums have increasingly recognized the imperative of instituting robust legal frameworks to safeguard the environment. These legislative endeavors represent pivotal measures in the broader endeavor to conserve our natural inheritance and mitigate the deleterious consequences of anthropogenic activities on planetary ecosystems.⁵

³ Shanty, Oktavilia, Wahyu Puspita Dita, and F. X. Sugiyanto. "The relationship between environmental degradation, poverty and human quality in Indonesia." *E3S Web of Conferences*. Vol. 73. EDP Sciences, 2018; Setyadharma, A., et al. "The trade-off between poverty and environmental degradation: evidence from Indonesia." *IOP Conference Series: Earth and Environmental Science*. Vol. 448. No. 1. IOP Publishing, 2020.

⁴ See Tianur, Agus, et al. "Environment Degradation and Rural Livelihood of Mulawarman Community in Indonesia." *Jurnal Manajemen Hutan Tropika* 28.3 (2022): 279-279; Khan, Anwar, et al. "The empirical relationship between environmental degradation, economic growth, and social well-being in Belt and Road Initiative countries." *Environmental Science and Pollution Research* 27 (2020): 30800-30814.

⁵ Arifin, Ridwan, and Siti Hafsyah Idris. "In Dubio Pro Natura: in Doubt, should the Environment Be a Priority? A Discourse of Environmental Justice in Indonesia." *Jambe Law Journal* 6.2 (2023): 143-184; Triyanti, Annisa, et al. *Environmental Governance in Indonesia*. Springer Nature, 2023.

In this case, achieving a delicate equilibrium between economic development and environmental preservation is paramount. The unchecked exploitation of natural resources for economic gain poses a grave risk of injustice, potentially escalating to catastrophic proportions that imperil human life.⁶ This injustice manifests in various forms, notably through the unmitigated depletion of environmental resources essential for sustaining life.⁷ Such exploitation disregards the imperative of preserving environmental functions vital for supporting human livelihoods, thereby infringing upon the rights of communities reliant on these ecosystems.

Moreover, the perception of natural resources as communal assets, free for unrestricted utilization, further exacerbates this predicament.⁸ This notion of common ownership fosters a sense of entitlement, wherein responsible stewardship is eclipsed by opportunistic exploitation. Absent clear regulatory delineations within environmental law, the absence of defined usage protocols perpetuates this cycle of resource mismanagement and environmental degradation.⁹

⁶ Tisdell, Clement Allan, ed. *Economics of Environmental Conservation*. Vol. 1. Edward Elgar Publishing, 2005; Rani, Asni Mustika, et al. "Environmental Policies for Sustainable Economic Growth Achievement in Indonesia and Negara Brunei Darussalam." *4th Social and Humanities Research Symposium (SoRes 2021)*. Atlantis Press, 2022.

⁷ Akter, Taslima. *Resource Exploitation and Environmental Crisis: An Ethical Analysis*. Diss. University of Dhaka, 2023; Blomfield, Megan. *Global justice, natural resources, and climate change*. Oxford University Press, USA, 2019; Stec, Stephen. "Humanitarian limits to sovereignty: common concern and common heritage approaches to natural resources and environment." *International Community Law Review* 12.3 (2010): 361-389.

⁸ Kurien, John. "The blessing of the commons: small-scale fisheries, community property rights, and coastal natural assets." *Reclaiming Nature: Environmental Justice and Ecological Restoration* 1 (2007): 23. See also Baland, Jean-Marie, and Jean-Philippe Platteau. *Halting degradation of natural resources: is there a role for rural communities?*. Food & Agriculture Org., 1996.

⁹ Robbins, Paul. "The rotten institution: corruption in natural resource management." *Political Geography* 19.4 (2000): 423-443; Denton, Fatma. "Climate change vulnerability, impacts, and adaptation: Why does gender matter?." *Gender & Development* 10.2 (2002): 10-20.

Given Indonesia's adoption of a capital-oriented integrated economic system, the utilization of natural resources as a catalyst for economic growth is an inexorable reality. Within this framework, various environmental dynamics within Indonesia contribute to the erosion of natural sustainability.

In addressing these challenges, John Maddox contends that environmental degradation, whether through pollution or destruction, can be remedied by quantifying the associated costs—a viewpoint that reduces the issue to an economic conundrum. Maddox posits that by ascertaining the financial implications of pollution, solutions can be devised to mitigate its impact. This entails a willingness to invest in pollution abatement measures, whether through the development of anti-pollution technologies or through compensatory mechanisms for pollution-induced losses.¹⁰

Maddox's perspective underscores the pivotal role of economic considerations in environmental management, advocating for a pragmatic approach that acknowledges the economic dimensions of environmental stewardship. Through this lens, the ability to effectively address environmental challenges hinges upon the willingness of stakeholders to allocate resources towards pollution mitigation efforts.

In addition, in the 1960s, E.J. Mishan initiated discourse on the cost of economic growth, introducing the Polluter Pays Principle (PPP), which posits that a polluter is someone capable of avoiding pollution but chooses not to. This principle gained traction and evolved over time, culminating in its formal adoption and development by the Member States of the Organization for Economic Cooperation and Development (OECD) in 1972.¹¹

¹⁰ Maddox, John. "Pollution and worldwide catastrophe." *Nature* 236.5348 (1972).
See also Maddox, Gregory H. "Africa and Environmental History." *Environmental History* 4.2 (1999): 162-167.

¹¹ See Mishan, Edward J., and Ezra J. Mishan. *The Costs of Economic Growth*. Vol. 9. London: Staples Press, 1967. See also Mishan, Ezra J. "Ills, bads, and disamenities: The wages of growth." *The No-Growth Society*. Routledge, 2013, pp. 63-87; Mishan, Ezra J. "On the Economics of Disamenity." *The Corporate Society* (1974): 337-369; Vicha, Ondřej. "The polluter-pays principle in OECD recommendations

At its core, the PPP mandates that polluting actors assume financial responsibility for both the prevention and mitigation of pollution they generate. Functioning as an economic instrument, the principle integrates the internalization of costs within the production process, serving as a preemptive measure against potential pollution.¹²

Drawing upon a synthesis of legal analysis, case studies, and empirical evidence, this paper aims to unravel the intricate interplay between economic interests and environmental degradation in Indonesia. It navigates through the complex web of policies, regulatory frameworks, and corporate practices to illuminate the ways in which the Polluter Pays Principle is both invoked and circumvented in the Indonesian context.

Through a critical lens, we interrogate instances where corporate entities prioritize short-term gains over long-term sustainability, exploiting regulatory loopholes and lax enforcement mechanisms to externalize the true costs of pollution. Moreover, we explore the systemic challenges and structural inequities that undermine the effective implementation of the PPP, perpetuating a cycle of environmental degradation and social injustice.

By shedding light on these issues, this paper seeks to not only deepen our understanding of Indonesia's environmental governance but also to provoke broader reflections on the inherent tensions between economic development and ecological preservation in a rapidly changing world. As we confront the pressing imperatives of climate change and biodiversity loss, the imperative to reconcile profits with the planet has never been more urgent.

and its application in international and EC/EU law." *Czech Yearbook of Public & Private International Law* 2 (2011): 57-67.

¹² Schwartz, Priscilla. "The polluter-pays principle." *Research handbook on international environmental law*. Edward Elgar Publishing, 2010; Zhu, Ling, and Yachao Zhao. "Polluter-pays Principle-Policy Implementation." *Environmental Policy and Law* 45.1 (2015): 34-39.

Polluter-Pays Principle: Some Practices and Challenges

Contemporary environmental law encompasses a multitude of principles aimed at addressing and rectifying environmental degradation. Within this discourse, Chang Seok Lee expounds upon various strategies for ecosystem restoration in his journal. He elucidates that the remediation of environmentally compromised ecosystems can be achieved through two primary approaches: firstly, by ameliorating the environment to prevent further pollution from pollution sources, and secondly, by introducing plant species capable of tolerating pollutants.¹³

Lee draws upon the works of Bradshaw¹⁴, Dobson et al.¹⁵, and Gunn¹⁶ to underscore the efficacy of these approaches. They highlight that species resilient to environmental pollution can persist, proliferate, and even expand their habitats within polluted environments, while conversely, sensitive species diminish in such conditions. These ecological

¹³ Lee, Chang-Seok, Young-Han You, and George R. Robinson. "Secondary succession and natural habitat restoration in abandoned rice fields of central Korea." *Restoration Ecology* 10.2 (2002): 306-314. *See also* Kim, A. Reum, et al. "Principle of restoration ecology reflected in the process creating the National Institute of Ecology." *Journal of Ecology and Environment* 45 (2021): 1-12.

¹⁴ Bradshaw, Anthony D. "Underlying principles of restoration." *Canadian Journal of Fisheries and Aquatic Sciences* 53.S1 (1996): 3-9; Bradshaw, Anthony D. "The importance of soil ecology in restoration science." *Restoration ecology and sustainable development* (1997): 33-64.

¹⁵ Dobson, Andy, et al. "The assembly, collapse and restoration of food webs." *Philosophical Transactions of the Royal Society B: Biological Sciences* 364.1524 (2009): 1803-1806; Dobson, Andrew, et al. "Habitat loss, trophic collapse, and the decline of ecosystem services." *Ecology* 87.8 (2006): 1915-1924.

¹⁶ Gunn, John M., et al. "From restoration to sustainable ecosystems." *Restoration and Recovery of an Industrial Region: Progress in Restoring the Smelter-Damaged Landscape Near Sudbury, Canada*. New York, NY: Springer New York, 1995. 335-344; Carvalho, Laurence, et al. "Ecological restoration." *Handbook of Catchment Management 2e* (2021): 245-269.

dynamics ultimately precipitate shifts in species composition at the community level, as articulated by Barrett et.al¹⁷ and Hobbs and Norton.¹⁸

Chang Seok Lee's analysis introduces a notable principle absent from previous discussions: the Polluter-Pays Principle (PPP). This economic policy, initially conceived to allocate costs for pollution and environmental damage, has evolved significantly over time, profoundly influencing the development of environmental law both on international and national scales. This evolution manifests in various aspects, including issues of liability for compensation and the allocation of environmental costs borne by public entities.

Originating from OECD recommendations in the 1970s, the PPP fundamentally mandates that polluters bear the financial burdens associated with environmental protection efforts. Essentially, this principle requires polluters to internalize the costs necessary for maintaining environmental quality. In practical terms, this entails that the costs incurred in conducting business activities must be reflected in the prices of goods or services, accounting for their contribution to pollution during production or use processes.¹⁹

Therefore, in theoretical terms, the Polluter-Pays Principle (PPP) can be viewed as a mechanism intricately linked to the concept of internalizing externalities. Alan Boyle, in his writings, asserts that the application of the PPP necessitates a departure from sole reliance on taxes or charges. He contends that such measures frequently prove inadequate in curbing demand for goods that contribute to environmental damage or pollution.

In this context, the Polluter-Pays Principle (PPP) necessitates complementary mechanisms for its effective implementation, notably civil liability. The efficacy of accountability measures in internalizing

¹⁷ Barrett-Lennard, Edward G., Hayley C. Norman, and Kingsley Dixon. "Improving saltland revegetation through understanding the "recruitment niche": potential lessons for ecological restoration in extreme environments." *Restoration Ecology* 24 (2016): S91-S97.

¹⁸ Hobbs, Richard J., and David A. Norton. "Towards a conceptual framework for restoration ecology." *Restoration Ecology* 4.2 (1996): 93-110.

¹⁹ Bugge, Hans Christian. "The polluter pays principle: dilemmas of justice in national and international contexts." *Environmental Law and Justice in Context* 2009 (2009): 411-428.

externalities hinges on various factors, including the severity of environmental pollution's impact.²⁰

PPP stands as a pivotal principle in environmental management and preservation efforts. Its widespread adoption and practice by nations globally began around 1973. References to the PPP abound in various legal instruments, particularly within the realm of soft law, where it is categorized as a soft principle. Over time, the PPP has undergone refinement and codification in international legal frameworks, further solidifying its role in shaping environmental governance.

The primary functions of the Polluter Pays Principle, as outlined in OECD recommendations, serve to allocate the costs of pollution prevention and control measures. This allocation aims to promote the prudent utilization of limited environmental resources and to prevent distortions in international trade and investment. Specifically, the principle mandates that polluters shoulder the financial burden of implementing measures determined by public authorities to uphold environmental standards deemed acceptable.²¹

At its core, the Polluter Pays Principle (PPP) is fundamentally concerned with allocating pollution prevention costs and control measures to incentivize the responsible utilization of limited environmental resources, while also mitigating distortions in international trade and investment. Under this principle, polluters are mandated to assume the financial responsibility for implementing measures determined by public authorities to maintain an environmentally acceptable state.²²

Furthermore, the OECD delineates the role of the PPP, highlighting its implementation through two distinct policy approaches: command-and-control and market-based mechanisms. Command-and-control strategies typically encompass performance and technology standards.

²⁰ Damigos, D., and D. Kaliampakos. "Economic aspects of modern environmental policy issues: a step forward." *WIT Transactions on Ecology and the Environment* 98 (2006).

²¹ Borowy, Iris. "Negotiating Environment: The Making of the OECD Environment Committee and the Polluter Pays Principle, 1968–1972." *The OECD and the International Political Economy Since 1948* (2017): 311-334.

²² Long, Bill L. "Environmental regulation: The third generation." *Organisation for Economic Cooperation and Development. The OECD Observer* 206 (1997): 14.

Conversely, market-based instruments consist of pollution taxes, tradable pollution permits, and product labeling. Additionally, the eradication of subsidies constitutes a crucial facet of PPP application.

In addition, essentially, the Polluter Pays Principle (PPP) is commonly operationalized through two distinct policy approaches: a Command-and-Control framework, encompassing performance and technology standards, and market-based instruments, such as pollution taxes, tradable pollution permits, and product labeling. Additionally, the elimination of subsidies plays a pivotal role in the effective implementation of the PPP.

The OECD delineates the "*what to pay*" aspect regarding the implementation of the Polluter Pays Principle. One formulation stipulates that polluters ought to bear the responsibility for compensating for the pollution they cause. However, opposition has emerged on several grounds:

1. Environmental restoration may be inadequate in cases of severe damage with impacts that cannot be fully remedied through compensation alone.
2. Recovery from damage presents numerous challenges, including the identification of long-term and indirect impacts.
3. Estimating the costs of damage versus the costs of recovery often proves economically futile.²³

Furthermore, the OECD elaborates on the application of the Polluter Pays Principle, which entails charging the costs of activities necessary to prevent pollution. This can manifest through various means, including levying incentives equivalent to the costs of waste cleanup or establishing criteria mandating preventive measures. According to the

²³ See Israel, Debra, and Arik Levinson. "Willingness to pay for environmental quality: testable empirical implications of the growth and environment literature." *Contributions in Economic Analysis & Policy* 3.1 (2004): 1-29; Engel, Uwe, and Manuela Pötschke. "Willingness to pay for the environment: social structure, value orientations and environmental behaviour in a multilevel perspective." *Innovation: The European Journal of Social Science Research* 11.3 (1998): 315-332; Bleeker, Arne. "Does the polluter pay? The polluter-pays principle in the case law of the European Court of Justice." *European Energy and Environmental Law Review* 18.6 (2009).

OECD, pollution control efforts encompass a spectrum of costs, including those associated with implementing anti-pollution policies, conducting management measurements and monitoring, research and technology development for pollution management units, and maintaining waste management installations.²⁴

The OECD's approach to pollution control is encapsulated in seven policies: direct control, taxation, payments, subsidies, various incentive schemes such as tax benefits and credit facilities, amortization/accelerated debt repayment, and the auctioning of pollution rights and levies.²⁵

²⁴ See also Purwendah, Elly Kristiani, Agoes Djatmiko, and Elisabeth Pudyastiwi. "Civil Responsibility Model of Coastal State to Oil Pollution in the Sea as the Impact from the Stipulation of Dumping Area by Tanker Ship." *The Indonesian Journal of International Clinical Legal Education* 1.1 (2019): 337-352; Putro, Widodo Dwi, and Adriaan W. Bedner. "Ecological Sustainability from a Legal Philosophy Perspective." *Journal of Indonesian Legal Studies* 8.2 (2023): 595-632.

²⁵ Furthermore, it is emphasized that the OECD employs a multifaceted approach to pollution control, encapsulated in seven distinct policies. Direct control represents a regulatory stance, where governmental bodies impose stringent measures directly on polluting activities. These measures could entail setting emissions standards or mandating the use of specific pollution control technologies, ensuring a tangible reduction in harmful environmental impacts. Taxation emerges as a pivotal tool in the OECD's arsenal, with governments levying taxes on pollutants or activities that contribute to pollution. By internalizing the external costs of pollution, these taxes compel polluters to bear the financial burden of their actions, thereby incentivizing cleaner practices and mitigating environmental harm. Payments, on the other hand, offer financial incentives to entities engaging in pollution reduction or environmental protection endeavors. Through grants or subsidies, governments stimulate the adoption of cleaner technologies and practices, fostering a transition towards sustainability. Conversely, subsidies provide financial assistance to industries or activities deemed conducive to environmental protection. By incentivizing environmentally friendly practices, subsidies play a crucial role in fostering eco-conscious behavior within industries. Various incentive schemes augment these efforts, encompassing a spectrum of measures designed to promote environmentally responsible behavior. Tax benefits for green investments, preferential treatment for eco-friendly products, and access to credit facilities for sustainable projects all contribute to shaping a greener economy. Amortization and accelerated debt repayment mechanisms adjust loan repayment terms to encourage investments in pollution control or environmental conservation. By offering favorable financing options, these policies facilitate the implementation of

The implementation of the Polluter Pays Principle (PPP) alongside economic instruments is not without its shortcomings. One notable weakness lies in the dependency of payments on the quantity of pollutants or pollution released, which must still be aligned with the "*lifetime of production projects*." This constraint renders the imposition of environmental taxes ineffective and potentially detrimental to social welfare. The formulation of the Polluter Pays Principle (PPP), incorporating both economic and legal instruments, is further elucidated by Seerden, who asserts:

"Under the Polluter Pays Principle, the polluter is fundamentally obligated to prevent any adverse environmental impact and, if such impact occurs, to remediate all resulting harm. This principle not only pertains to the allocation of costs associated with avoidance, remediation, and compensation of environmental harm but also justifies various measures of direct action (such as orders and prohibitions), incentive charges, and legal claims compelling responsible parties to take corrective action. Consequently, the PPP serves as a substantive principle in attributing responsibility for environmental impact, hazard, and risk."²⁶

environmentally beneficial projects. Finally, the auctioning of pollution rights and levies introduces market-based mechanisms into the equation. Creating a market for pollution permits enables companies to buy and sell emission allowances, while levies on pollution emissions discourage excessive pollution and generate revenue for environmental initiatives. Through this comprehensive suite of policies, the OECD endeavors to combat pollution, incentivize environmental stewardship, and internalize the true costs of environmental degradation. *See also* Woerdman, Edwin, Alessandra Arcuri, and Stefano Clò. "Emissions trading and the polluter-pays principle: do polluters pay under grandfathering?." *Review of Law & Economics* 4.2 (2008): 565-590; Tilton, John E. "Global climate policy and the polluter pays principle: A different perspective." *Resources Policy* 50 (2016): 117-118; Aragão, Alexandra. "Polluter-Pays Principle." *Encyclopedia of Contemporary Constitutionalism*. Cham: Springer International Publishing, 2022, pp. 1-24; Khan, Mizan R. "Polluter-pays-principle: The cardinal instrument for addressing climate change." *Laws* 4.3 (2015): 638-653.

²⁶ See Seerden, René. "Public environmental law in the Netherlands." *Public Environmental Law in the European Union and the United States, A Comparative Analysis*. Kluwer Law International, 2002. 341-393.

Seerden posits that perpetrators or polluters have an obligation to avert all potential adverse environmental consequences. While this viewpoint remains intertwined with the aspect of allocating costs in pollution protection, it also intersects with the domain of legal responsibility.

In numerous instances of environmental pollution cases, legal accountability is intertwined with endeavors aimed at mitigating adverse impacts. This integration occurs within the context of reconciling the divergent interests of industry and the community, including the imperative to uphold harmonious and equitable environmental stewardship. From this elucidation, it becomes apparent that the Polluter Pays Principle (PPP) assumes dual interpretations. On one hand, it functions as an economic instrument designed to levy costs upon potential polluters. On the other hand, it serves as a fundamental mechanism to assert legal accountability in cases of environmental pollution.²⁷

Application of the Polluter-Pays Principle According to the OECD

The results of the OECD report on *the Polluter-pays Principle* also mentioned the idea of: "*Who Pays for What?*" In the report, there is a chapter that specifically discusses the relationship between pollution and also responsibility, namely polluters are not always responsible for the pollution they do. For example: there is a driver who pollutes and makes noise not responsible himself, but collectively with the producer of the car. Obviously, determining polluters may not be difficult, but it can

²⁷ BrunnÉee, Jutta. "Of sense and sensibility: reflections on international liability regimes as tools for environmental protection." *International & Comparative Law Quarterly* 53.2 (2004): 351-368; Bergkamp, Lucas. *Liability and environment: private and public law aspects of civil liability for environmental harm in an international context*. Brill, 2021; Fitzmaurice, Malgosia. *Contemporary issues in international environmental law*. Edward Elgar Publishing, 2009.

sometimes be confusing and potentially cost solely to *the physical polluters*.²⁸

Furthermore, the OECD report links pollution with power, in the sense of finding out who finds the economic and technical power to tackle pollution. For example, entrepreneurs have the ability to make their production pollution-free, namely by installing pollution prevention tools, so it is not feasible to burden the "*victim*" alone. In other words, the polluter pays principle differently in outcome, depending on the applicability to the producer or consumer.²⁹

The OECD report above also discusses *actual polluters*. Polluters who potentially pose a risk of pollution are taxed as funds to pay compensation to victims of pollution, if the responsible party cannot be contacted or found. For example: cases of marine pollution, financed from taxes on oil imported or transported by sea

Furthermore, a study conducted by the OECD to deal with pollution control problems, concluded that there are two main streams, namely:

1. Those who expect direct control by the only strategy or means are the imposition of regulations on polluters, especially regarding emission standards
2. Those who prefer an economic approach. This group argues that various natural resources are wasted because they are considered free or less or even not considered at all. They consider it necessary to set a "*fair price*" for each environment which includes pollution levies

Article 4 of the Annex to the OECD Recommendations articulates the essence of the Polluter-Pays Principle (PPP) that, the principle guiding the allocation of costs for pollution prevention and control measures aims to incentivize the prudent utilization of national environmental resources and mitigate distortions in international trade and investment. Under this principle, known as the '*Polluter-Pays Principle*,' polluters are obligated to bear the costs associated with implementing the aforementioned measures

²⁸ Zhu, Ling, and Yachao Zhao. "Polluter-pays Principle-Policy Implementation." *Environmental Policy and Law* 45.1 (2015): 34-39.

²⁹ Barthakur, Ashmita. "Polluter pays principle as the key element to environmental law." *International Journal of Scientific and Research Publications* 11.3 (2021): 274-277.

mandated by public authorities to uphold an acceptable environmental standard. Put simply, these costs should be integrated into the pricing of goods and services responsible for pollution in production and consumption processes. Furthermore, such measures should not be accompanied by subsidies that could engender significant distortions in international trade and investment.³⁰

The article stipulates that member states are admonished against intervening or aiding polluters in offsetting pollution control expenses, whether through subsidies, tax incentives, or other means. Nevertheless, certain developed nations, such as France and the Netherlands, have implemented a combination of pollution levies alongside subsidies and financial support measures.

Fundamentally, the primary objective of this principle is to internalize environmental costs. Serving as a cornerstone of environmental policy, it mandates that polluters bear the responsibility for mitigating or eradicating pollution, including the obligation to cover the costs associated with its elimination. Consequently, this principle forms the basis for the imposition of pollution levies. The implementation of this principle involves the utilization of economic instruments, such as levies on air and water pollution and deposit fees, to ensure that polluters internalize the true environmental costs of their activities.³¹

From an economic perspective, levies emerge as a highly effective pollution control mechanism. They serve as a continual incentive for pollution reduction while simultaneously lowering the costs associated with remedial measures. However, an assumption was challenged, which equated the levy cost to purchasing the right to pollute. In essence, this

³⁰ Heine, Dirk, Michael G. Faure, and Goran Dominioni. "The polluter-pays principle in climate change law: An economic appraisal." *Climate Law* 10.1 (2020): 94-115.

³¹ See also Dommen, Edward. "The four principles for environmental policy and sustainable development: an overview." *Fair Principles for Sustainable Development* (1993): 7-32; Elliott, E. Donald, and Daniel C. Esty. "The End Environmental Externalities Manifesto: A Rights-Based Foundation for Environmental Law." *NYU Environmental Law Journal* 29 (2021).

suggests that polluters, by paying the levy, acquire the privilege to engage in polluting activities as long as they compensate for damages.³²

This contention is rebutted by evidence demonstrating that properly calibrated pollution levies can indeed incentivize polluters to curtail emissions. In this scenario, effective waste management becomes economically advantageous compared to polluting and subsequently paying compensation claims. Moreover, concerning the matter of what polluters ought to pay, the OECD offers insightful guidance:

1. The imposition of responsibility on polluters to cover the costs of pollution they generate is a crucial step. However, this arrangement proves unsatisfactory and even perilous for several reasons:
 - a. Environmental restoration is meaningless in the event of the occurrence of severe damage the impact of which cannot be resolved by pure indemnity,
 - b. Damage recovery contains many, for example, long-term impacts and the discovery of indirect impacts
 - c. Estimated cost of damage to recovery costs
 - d. Repair damage is often futile from an economic point of view because prevention is better than cure
2. Polluters pay by imposing the costs of activities essential for pollution prevention. This can take the form of levying incentives equivalent to the expenses incurred in waste cleanup, or by establishing criteria mandating preventive measures.

Additionally, the OECD highlights that pollution control entails various other costs beyond those mentioned above. These include alternative costs associated with implementing anti-pollution policies, expenses related to management measurement and monitoring, research and development costs for anti-pollution technology, and contributions towards updating outdated infrastructure. While the concept of polluters paying is sound, it remains imperative to precisely determine the extent of their financial responsibility.

³² Opschoor, Johannes Baptist, and R. Kerry Turner, eds. *Economic incentives and environmental policies: principles and practice*. Vol. 1. Springer Science & Business Media, 1994. See also Meade, James Edward. *The theory of economic externalities: The control of environmental pollution and similar social costs*. Vol. 2. Brill Archive, 1973.

In practice, the concept of the polluter paying entails that the polluter assumes the responsibility either as the initial payer or by internalizing external costs. Consequently, passing on these costs to consumers does not undermine the principle. However, as highlighted in the OECD report referenced earlier, it is deemed unrealistic to expect that the entirety of pollution control measures be borne solely by polluters.

Polluter Pays Principle in Indonesian Law Practice

Indonesia is among the nations that have adopted the Polluter Pays Principle as part of its efforts to uphold and safeguard the environment within its borders. A notable example is reflected in the Marine Bill, which was ratified into Law Number 32 of 2014 concerning Marine on October 17, 2014. Article 52 of this law stipulates that the resolution process in disputes adheres to the principle of polluters paying and also incorporates the principle of prudence.³³

Furthermore, Article 52 of Law No. 32 of 2014 on Marine Affairs outlines the scope of marine pollution, encompassing:

1. Pollution originating from land-based activities;
2. Pollution stemming from activities conducted at sea;
3. Pollution originating from airborne activities.

The sources of marine pollution, as referenced in paragraph (1), may arise within Indonesia's territorial waters or jurisdictional areas, originating either from domestic sources or from activities outside its territorial waters or jurisdictional boundaries. Similarly, pollution may originate from within Indonesia's territorial waters or jurisdictional areas but outside its jurisdiction.

The Law further mandates that the resolution process of disputes and the imposition of sanctions for Marine Pollution, as delineated in

³³ See also Aida, Melly, and Ikhsan Setiawan. "The Implementation of Polluter Pays Principle in Indonesian Land Policy Regulation." *Jurnal Ilmiah Hukum dan Hak Asasi Manusia* 1.1 (2021): 37-42; Febiola, Stefany, et al. "Carbon Tax as an Implementation of the Polluter Pays Principle in Indonesia." *Realism: Law Review* 1.2 (2023): 1-19.

paragraph (1) and paragraph (2), are conducted in accordance with the Polluter Pays Principle and the principle of prudence.

In addition to the aforementioned example, another legislation in Indonesia that aligns with the Polluter Pays Principle is:

1. Law Number 32 of 2009 concerning Environmental Protection and Management

The operationalization of the Polluter Pays Principle is detailed in the explanation of Article 87 of Law No. 32 of 2009. Paragraph (1) of this article outlines the implementation of the principle stipulated in environmental law, known as the Polluter Pays Principle. Apart from being obligated to compensate for damages, polluters and/or environmental perpetrators may also be directed by the courts to undertake specific legal actions, including orders to:

- a. Install or repair waste treatment units so that waste is in accordance with specified environmental quality standards
 - b. restoring the functioning of the environment; and/or
 - c. eliminate or destroy the causes of pollution
 - d. and/or environmental destruction.³⁴
2. Law Number 27 of 2007 concerning Management of Coastal Areas and Small Islands

Regulation on Paying Polluters in the marine and fisheries sector can be seen in Law No. 27 of 2007 concerning Management of Coastal Areas and Small Islands. The Law stipulates incentives: Provision of program assistance that can be directed to optimize accreditation programs; and technical assistance for managers of accredited Coastal Areas and Small Islands Management programs (Article 40 paragraph 4); Civil: regulation on unlawful act (article 66) and strict liability (article 67); Administrative sanctions (articles 71 and 72), as well as criminal sanctions (articles 73-74).³⁵

3. Law No. 31 of 2004 *jo.* Law No. 45 of 2009 concerning Fisheries

³⁴ Pelengkahu, Muhammad Rahjay, and Najib Satria. "The Role of Environmental Legal Instruments and Government Policies in Realizing Sustainable Development in Indonesia." *Administrative and Environmental Law Review* 4.2 (2023): 127-138.

³⁵ Luppi, Barbara, Francesco Parisi, and Shruti Rajagopalan. "The rise and fall of the polluter-pays principle in developing countries." *International Review of Law and Economics* 32.1 (2012): 135-144.

Furthermore, Law No. 31 of 2004 in conjunction with Law No. 45 of 2009 concerning Fisheries also includes administrative sanctions in Article 41(4). This stipulates that individual owning and/or operating fishing vessels and/or fish transport vessels failing to load and unload caught fish at the designated fishing port mentioned in paragraph (3) may face administrative penalties, including warnings, license suspension, or license revocation. Additionally, criminal sanctions are outlined in Articles 84 to 100.³⁶

Within the context of Indonesia, we can analyse and critique the implementation of the Polluter Pays Principle by examining the following cases:

1. Pollution Case in Buyat Bay

The pollution incident in Buyat Bay, located in North Sulawesi, Indonesia, involved seawater contamination due to elevated levels of arsenic and mercury, surpassing established safety thresholds. PT Newmont Minahasa was implicated in this environmental issue for discarding rocks and soil remnants from gold ore extraction into the waters surrounding Buyat Bay. Concerns arose regarding the potential consequences, reminiscent of a tragedy that unfolded in Japan during the 1960s.

During that period, Minamata Bay in Japan experienced significant mercury pollution. Consequently, the local community, who relied on the bay for sustenance, endured neurological disorders and even cancer that emerged years after the operation of a battery stone company in the area. Such companies are indeed pivotal contributors to widespread environmental degradation. Moreover, this industry's activities have also played a role in the degradation of protected forest areas.

Additionally, *Polluter Pays Principle* asserts that those responsible for pollution must bear the costs of mitigating and remediating its effects. In the context of Buyat Bay, where seawater contamination occurred due to heavy metal discharge, particularly arsenic and mercury, the principle

³⁶ Maruf, Arifin. "Legal aspects of environment in Indonesia: An efforts to prevent environmental damage and pollution." *Journal of Human Rights, Culture and Legal System* 1.1 (2021).

applies directly to entities involved in the pollution, such as PT Newmont Minahasa. They are held accountable for the environmental damage caused by their activities, including the dumping of waste materials into the bay.³⁷

Legally, Indonesia's environmental laws provide the basis for analyzing these pollution cases. Laws such as Law Number 32 of 2009 concerning Environmental Protection and Management, Law Number 31 of 2004 concerning Fisheries, and Law Number 27 of 2007 concerning the Management of Coastal Areas and Small Islands, among others, establish regulations and sanctions for environmental violations. These laws empower authorities to enforce the Polluter Pays Principle by holding polluters accountable and imposing penalties for non-compliance.

These laws empower Indonesian authorities to enforce the Polluter Pays Principle effectively. By holding polluters accountable for their actions, authorities can impose penalties for non-compliance, thereby incentivizing responsible behavior and deterring future environmental harm.³⁸

Various scholars have offered insights into the application of environmental laws in cases like Buyat Bay. For instance, Naibaho³⁹,

³⁷ See Asiana, Lynda, and Hari Purwadi. "Principle of Obligation to Pay in Terms of Pollution at Sea." *3rd International Conference on Globalization of Law and Local Wisdom (ICGLOW 2019)*. Atlantis Press, 2019; Idris, Nur Isdah. "Buyat Case: An Advocacy Against the Giant PT. International Newmont." *WANUA: Jurnal Hubungan Internasional* (2015): 48-57.

³⁸ Septanti, Dini. "The Buyat Case: Straddling between Environmental Securitization and De-securitization." *Global & Strategis* 7.2 (2013):183-195. See also Purwendah, Elly Kristiani, Agoes Djatmiko, and Elisabeth Pudyastiwi. "Civil Responsibility Model of Coastal State to Oil Pollution in the Sea as the Impact from the Stipulation of Dumping Area by Tanker Ship." *The Indonesian Journal of International Clinical Legal Education* 1.1 (2019): 337-352.

³⁹ Naibaho, Nathalina. "Rethinking the ultimatum remedium principle to support justice and strong law enforcement institutions in environmental crimes." *IOP Conference Series: Earth and Environmental Science*. Vol. 716. No. 1. IOP Publishing, 2021.

Akib⁴⁰, Idris⁴¹ and Gugule & Mesra⁴² emphasize the importance of rigorous enforcement of environmental regulations to address pollution issues effectively. They advocate for a holistic approach that combines legal measures with scientific research and community engagement to achieve sustainable environmental management.

Additionally, Mumbunan, et.al, an environmental policy expert, highlights the significance of institutional capacity building and stakeholder collaboration in enforcing environmental laws. They stress the need for transparent governance structures and robust monitoring mechanisms to ensure compliance with environmental regulations and uphold the Polluter Pays Principle.⁴³

In the context of Buyat Bay, the scholars would likely underscore the importance of stringent enforcement of Indonesia's environmental laws to hold polluters accountable and address the adverse impacts of pollution on local communities and ecosystems. They would advocate for multi-stakeholder efforts to promote environmental justice and sustainable development in affected areas.

In the further, international conventions and agreements, to which Indonesia is a signatory, reinforce the Polluter Pays Principle and provide additional legal basis for its application in the Buyat Bay case. For example, Indonesia's commitment to the United Nations Convention on the Law of the Sea (UNCLOS) and the International Convention for the Prevention of Pollution from Ships (MARPOL) underscores its obligation to uphold environmental responsibilities, including addressing marine pollution.

⁴⁰ Akib, Muhammad. "Learning Environmental Rights, Finding Green Future: The Road to Ecojustice." *International Conference On Law, Business and Governance (Icon-LBG)*. Vol. 1. 2013.

⁴¹ Idris, Nur Isdah. "Buyat Case: An Advocacy Against the Giant PT. International Newmont." *WANUA: Jurnal Hubungan Internasional* (2015): 48-57.

⁴² Gugule, Hamdi, and Romi Mesra. "Implementation of the Community Development Program in the Mining Circle Community in the East Bolaang Mongondow Regency." *Unima International Conference on Social Sciences and Humanities (UNICSSH 2022)*. Atlantis Press, 2023.

⁴³ Mumbunan, Sonny, Irene Ring, and Thomas Lenk. *Ecological fiscal transfers at the provincial level in Indonesia*. No. 06/2012. UFZ Discussion Paper, 2012.

Article 192 of UNCLOS establishes the general obligation of states to protect and preserve the marine environment. It states: "*States have the obligation to protect and preserve the marine environment.*" Furthermore, Article 194 of UNCLOS outlines specific measures to prevent, reduce, and control marine pollution, including pollution from land-based sources, such as the dumping of waste into coastal waters like Buyat Bay: "*States shall take, individually or jointly as appropriate, all measures consistent with this Convention that are necessary to prevent, reduce and control pollution of the marine environment from any source.*"⁴⁴

In the case of MARPOL, Annex V addresses the prevention of pollution by garbage from ships. It prohibits the disposal of plastics and other harmful substances into the sea. The dumping of waste materials, such as those discharged by PT Newmont Minahasa into Buyat Bay, would likely violate the provisions of MARPOL Annex V.⁴⁵

In light of these provisions, Indonesia's adherence to UNCLOS and MARPOL underscores its legal obligation to combat marine pollution and hold polluters accountable. These international conventions provide a solid legal foundation for addressing pollution cases like Buyat Bay and reinforce the application of the Polluter Pays Principle in ensuring environmental protection and conservation.⁴⁶

In analyzing pollution cases in Buyat Bay, it's essential to evaluate adherence to these legal frameworks, the effectiveness of enforcement mechanisms, and the extent to which the Polluter Pays Principle is implemented in holding responsible parties accountable for their actions.

2. Oil Transport Ship Spill Incident in Banten

⁴⁴ See Asiana, Lynda, and Hari Purwadi. "Principle of Obligation to Pay in Terms of Pollution at Sea." *3rd International Conference on Globalization of Law and Local Wisdom (ICGLOW 2019)*. Atlantis Press, 2019; Katz, Rebecca S. "Environmental pollution: corporate crime and cancer mortality." *Contemporary Justice Review* 15.1 (2012): 97-125.

⁴⁵ See Purwendah, et.al., "Civil Responsibility Model of Coastal State to Oil Pollution in the Sea as the Impact from the Stipulation of Dumping Area by Tanker Ship."

⁴⁶ Lisdiyono, Edy. "Improving legal argument critically in the litigation mechanism in Indonesia (an empirical study of environmental verdicts)." *Sriwijaya Law Review* 1.1 (2017): 80-92.

In late 2013, an oil spill occurred in the waters of Ciwandan, Banten, Indonesia, involving the MT Southern Mermaid ship. Subsequent investigations revealed that the MT Southern Mermaid was operated by PT. Serasi Shipping Indonesia.

The incident unfolded following a collision that resulted in the ship's leakage and subsequent oil spill. It was estimated that over 18 tons of oil spilled into the sea as a result of this incident. Notably, the ship's captain, entrusted as the leader, failed to take adequate measures to prevent and address the oil spill in accordance with national and international regulations governing pollution prevention.

This case underscores the importance of adherence to environmental regulations and the Polluter Pays Principle. The ship's operator, PT. Serasi Shipping Indonesia, could be held liable for the environmental damage caused by the oil spill and may be required to bear the costs of cleanup and remediation efforts. Additionally, the captain's negligence in addressing the spill highlights the need for stricter enforcement of regulations and accountability measures to prevent similar incidents in the future.

The Indonesian government, through various agencies including the Ministry of Transportation, Directorate General of Sea Transportation, Kesyahbandaran Office, and Banten Class 1 Port Authority (KSOP Class 1 Banten), took decisive action by apprehending the MT Southern Mermaid ship. This measure was aimed at preventing further widespread spills at sea, and the detention of the ship was carried out in the waters around Snake Island, Anyer.

Although there were no significant damages caused by the oil spill from the MT Southern Mermaid ship at the time of the incident, immediate consequences and impacts were observed. The incident resulted in the pooling of oil in the waters and along the coast of Ciwandan for a duration of three days. While the full extent of the environmental impact may not have been immediately apparent, the prompt response and containment efforts by the authorities were crucial in mitigating potential harm to the marine ecosystem and coastal areas.

Furthermore, the oil spill from the MT Southern Mermaid Ship also impacted two other vessels present at the scene. In response, the Indonesian government conducted tests on oil samples to investigate allegations of marine pollution caused by the MT Southern Mermaid

Ship. The government specifically tested samples of pure oil, used as fuel for the MT Southern Mermaid, as well as samples of the spilled oil in the waters of Ciwandan. This testing was conducted by the Government of Indonesia through the Cilegon City Environment Agency (BLH Kota Cilegon).

In addressing the oil spill incident involving the MT Southern Mermaid Ship, the Indonesian government undertook several actions. These included cleanup operations to remove the remaining spilled oil in Ciwandan Periaran, sampling efforts to assess the extent of environmental contamination, surveillance measures to monitor the situation, and enforcement actions to uphold environmental regulations.

In this case, the Government of Indonesia, represented by KSOP Class I Banten under the Directorate General of Sea Transportation of the Ministry of Transportation, took decisive action. Given its mandate to oversee shipping safety and security, KSOP Class I Banten detained the MT Southern Mermaid to prevent further oil spills from the ship. Concurrently, investigations were launched by KSOP Class I Banten to probe alleged violations of Article 17 of Law Number 17 of 2008 concerning Shipping, as well as suspected marine pollution by the MT Southern Mermaid Ship. On November 17, 2013, KSOP Class I Banten initiated efforts to handle and clean up the oil spill in Ciwandan Waters. Utilizing an Oil Skimmer, they executed the cleanup operation swiftly.

Moreover, alongside its own cleanup endeavors, KSOP Class I Banten instructed MT Southern Mermaid to participate in the cleanup efforts in Ciwandan waters. This multifaceted approach underscores the government's commitment to addressing environmental issues effectively and ensuring accountability for maritime incidents.

KSOP Class I Banten made a formal request to PT. Serasi Shipping Indonesia, the representative agent of the MT Southern Mermaid Ship in Indonesia, to dispatch a team for oil cleanup in Ciwandan waters. A team of specialists from PT OSCT (Oil Spillage Combat Team), appointed by the owner of the ship MT Southern Mermaid, was deployed for this purpose. However, despite their efforts, only approximately 8 tons of oil were successfully cleaned and removed from the sea.

In addition to the cleanup operations, KSOP Class I Banten also conducted sampling of both pure oil (fuel from the MT Southern

Mermaid Ship) and oil-contaminated seawater. These samples were submitted to the Cilegon City Environment Agency (BLH Kota Cilegon) on November 18, 2013. The collaboration between BLH Kota Cilegon and KSOP Class I Banten aimed to conduct laboratory tests on the samples. These tests were crucial to determine the presence of marine pollution attributable to the MT Southern Mermaid Ship and to ascertain whether the oil in Ciwandan waters originated from the ship.

In the event of an oil spill, effective coordination among various stakeholders is essential to expedite the investigation and response process. Upon receiving samples from KSOP Class I Banten, BLH Cilegon City collaborated with LEMIGAS to conduct laboratory tests. The results of these tests, jointly conducted by LEMIGAS and BLH Cilegon City, confirmed that the oil found in the seawater of Ciwandan waters originated from the MT Southern Mermaid Ship. Furthermore, both agencies concluded that the oil content in Ciwandan waters exceeded the Sea Water Quality Standard, indicating marine pollution caused by the MT Southern Mermaid Ship.

In addition to laboratory analysis, KSOP Class I Banten undertook several investigative measures to address the oil spill incident. This included witness examinations, ship searches to collect evidence, and the confiscation of relevant materials. These proactive steps were crucial in gathering evidence and ensuring accountability for the pollution incident.

The oil spill incident involving the MT Southern Mermaid Ship in Ciwandan waters presents complex legal considerations under Indonesian environmental and maritime laws. Central to this analysis are statutes such as the Environmental Protection and Management Law (Law No. 32 of 2009), which outlines regulatory measures to prevent and address environmental pollution. Article 69 of this law stipulates penalties for activities leading to environmental harm, including marine pollution, while Article 70 empowers authorities to investigate and take necessary actions to mitigate pollution incidents.⁴⁷

⁴⁷ Indriati, Noer. "System of Responsibilities in International Marine Pollution." *3rd International Conference on Globalization of Law and Local Wisdom (ICGLOW 2019)*. Atlantis Press, 2019.

Additionally, the Shipping Law (Law No. 17 of 2008) plays a pivotal role in regulating maritime activities and addressing pollution in Indonesian waters. Article 17 of this law prohibits the discharge of pollutants into the sea and imposes penalties for violations. Authorities are granted the authority to detain ships involved in activities contravening environmental regulations under Article 18.⁴⁸

Furthermore, the Law on Fisheries (Law No. 31 of 2004) and the Law on the Management of Coastal Areas and Small Islands (Law No. 27 of 2007) provide legal frameworks for addressing marine pollution and protecting coastal environments. Article 36 of the Fisheries Law addresses the impact of pollution on fisheries resources, while Article 41 outlines administrative sanctions for non-compliance with environmental regulations. Similarly, the Law on the Management of Coastal Areas and Small Islands regulates activities in coastal regions, prohibiting actions leading to pollution or degradation of coastal environments under Article 20.⁴⁹

In light of these legal provisions, the actions of PT. Serasi Shipping Indonesia, as the operator of the MT Southern Mermaid Ship, come under scrutiny. The spillage of oil into Ciwandan waters could potentially result in administrative penalties, fines, or criminal charges if negligence or deliberate misconduct is established. The collaborative efforts between government agencies such as KSOP Class I Banten and BLH Cilegon City in investigating the incident and coordinating cleanup efforts underscore Indonesia's commitment to enforcing environmental laws and holding polluters accountable for their actions.

Conclusion

In conclusion, the Polluter-Pays Principle serves as a pivotal economic policy aimed at allocating costs for pollution and environmental

⁴⁸ Najicha, Fatma Ulfatun, and I. Gusti Ayu Ketut Rachmi Handayani. "Legal Protection "Substantive Rights for Environmental Quality" on Environmental Law Against Human Rights in the Constitution in Indonesia." *International Conference on Law, Economics and Health (ICLEH 2020)*. Atlantis Press, 2020.

⁴⁹ Wijanarko, Frieda Pratiwi. "Sea Pollution in the Coastal Area: Problems and Challenges in Law Enforcement." *Law Research Review Quarterly* 8.3 (2022): 335-352.

damage. Over time, this principle has not only influenced the development of environmental law both internationally and nationally but also has implications for issues related to liability for compensation and the allocation of environmental costs to public officials. Its interpretation extends beyond being merely an economic instrument; it also serves as a fundamental tool for demanding legal accountability in cases of environmental pollution.

According to the OECD's guidance, polluters should bear the responsibility for the pollution they cause, encompassing not only the costs of cleaning up pollution but also the expenses required to prevent future pollution incidents. This can be achieved through measures such as levying incentives equivalent to cleanup costs or establishing criteria mandating preventive actions. Indonesia stands as an example of a country actively employing the Polluter-Pays Principle to safeguard and conserve its environment. This principle is enshrined in various laws, including Law No. 31 of 2004 jo. Law No. 45 of 2009, Law No. 27 of 2007, and Law No. 32 of 2009. By implementing these regulations, Indonesia seeks to uphold environmental sustainability while holding polluters accountable for their actions.

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*Earth provides enough to
satisfy every man's needs, but
not every man's greed*

Mahatma Gandhi

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