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Research Article

Non-Excessive Natural Resource Use and Sustainable Development: The Indigenous Environmental Wisdom of Lubuk Larangan

Nie-nadmierne wykorzystanie zasobów naturalnych a zrównoważony rozwój: rdzenna mądrość środowiskowa Lubuk Larangan

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Abstract

Sustainable development has guided global environmental governance for nearly four decades, yet continuing environmental degradation indicates persistent limitations in its implementation. This article examines whether clearer normative limits on natural resource use can strengthen sustainable development. It explores the Indonesian customary institution of *Lubuk Larangan* and identifies the principles of non-excessive utilization, sufficiency, and simplicity embedded in its Indigenous environmental wisdom. Using a normative juridical method, the study analyzes legal instruments, scholarly literature, and published ethnographic research through historical, systematic, and sociological interpretation. It argues that sustainable development becomes more difficult to achieve when profit-driven production and non-essential consumption exceed reasonable human needs and ecological limits. The article proposes non-excessive utilization, sufficiency, and simplicity as general principles of environmental law, while distinguishing them from concrete legal obligations, policy directions, and ethical commitments. Non-excessive utilization requires natural resource use to remain within both reasonable human needs and the carrying and regenerative capacities of ecosystems. The complementary principles of sufficiency, simplicity, and sharing further connect sustainable consumption with environmental responsibility and social justice. Where these principles have not been recognized in positive law, they are presented as a normative framework for legal reform rather than as existing legal obligations. The article concludes that integrating these principles into environmental law and natural resource governance could strengthen sustainable development by aligning economic activity with ecological limits, intergenerational equity, and Indigenous environmental wisdom.

Keywords

sustainable development; natural resource use; non-excessive utilization; Indigenous environmental wisdom; Lubuk Larangan; environmental ethics; environmental law; sufficiency; sustainable consumption; natural resource governance

Abstrakt

Zrównoważony rozwój od niemal czterech dekad wyznacza kierunek globalnego zarządzania środowiskiem, jednak utrzymująca się degradacja środowiska wskazuje na ograniczenia w jego realizacji. W artykule podjęto próbę ustalenia, czy wyraźniejsze normatywne ograniczenia wykorzystania zasobów naturalnych mogą przyczynić się do wzmocnienia zrównoważonego rozwoju. Analizie poddano indonezyjską instytucję prawa zwyczajowego *Lubuk Larangan* oraz zakorzenione w jej rdzennej mądrości środowiskowej zasady nie-nadmiernego wykorzystania, wystarczalności i prostoty. Z zastosowaniem metody normatywno-prawnej przeanalizowano akty prawne, literaturę naukową oraz opublikowane badania etnograficzne, wykorzystując interpretację historyczną, systemową i socjologiczną. Autorzy argumentują, że osiągnięcie zrównoważonego rozwoju staje się trudniejsze, gdy produkcja ukierunkowana na zysk i konsumpcja dóbr innych niż niezbędne przekraczają granice uzasadnionych potrzeb człowieka oraz ograniczenia ekologiczne. W artykule zaproponowano zasady nie-nadmiernego wykorzystania, wystarczalności i prostoty jako ogólne zasady prawa ochrony środowiska, odróżniając je od konkretnych obowiązków prawnych, kierunków polityki publicznej i zobowiązań etycznych. Zasada nie-nadmiernego wykorzystania wymaga, aby korzystanie z zasobów naturalnych pozostawało zarówno w granicach uzasadnionych potrzeb człowieka, jak i zdolności ekosystemów do podtrzymywania życia i regeneracji. Uzupełniające zasady wystarczalności, prostoty i dzielenia się dodatkowo łączą zrównoważoną konsumpcję z odpowiedzialnością środowiskową i sprawiedliwością społeczną. Tam, gdzie zasady te nie zostały uznane w prawie pozytywnym, przedstawiono je jako normatywne ramy reformy prawa, a nie jako istniejące obowiązki prawne. Włączenie tych zasad do prawa ochrony środowiska i zarządzania zasobami naturalnymi może wzmacniać zrównoważony rozwój poprzez lepsze dostosowanie działalności gospodarczej do ograniczeń ekologicznych, sprawiedliwości międzypokoleniowej i rdzennej mądrości środowiskowej.

Słowa kluczowe

zrównoważony rozwój; wykorzystanie zasobów naturalnych; nie-nadmierne wykorzystanie; rdzenna mądrość środowiskowa; Lubuk Larangan; etyka środowiskowa; prawo ochrony środowiska; wystarczalność; zrównoważona konsumpcja; zarządzanie zasobami naturalnymi

Introduction

The concept of sustainable development, as initiated by the World Commission on Environment and Development (WCED), was formulated to address the interrelated challenges of environmental degradation and economic development. The aspiration to raise living standards has driven the exploitation of natural resources with little regard for future generations, resulting in resource-use patterns that are neither prudent nor sustainable. At the same time, impoverished communities are often compelled to overexploit natural resources to sustain their livelihoods, thereby deepening their poverty and rendering their existence

increasingly precarious. Consequently, environmental problems have become increasingly widespread, as evidenced by marine pollution, deteriorating air and water quality, deforestation, desertification, acid rain, rising carbon dioxide concentrations, the proliferation of disease, and premature mortality (WCED 1987).

The development of increasingly sophisticated technologies as instruments for achieving economic prosperity in industrialized countries has, paradoxically, become a significant source of environmental concern. Technological advancement has intensified the extraction and consumption of natural resources by increasing dependence on chemicals, energy, and synthetic materials. This reality underscores a fundamental principle of sustainable development: humanity shares only one Earth, whose ecological limits must be respected to ensure the well-being of both present and future generations (WCED 1987).

An approach that treats development and environmental protection as separate concerns has ultimately proven inadequate, fostering development patterns that pose major threats to the planet's ecological integrity. Development and environmental protection are inherently interconnected and cannot be addressed in isolation. Poverty, in particular, has significant environmental consequences, as economically vulnerable communities often intensify the exploitation of natural resources to secure their livelihoods, thereby increasing pressure on the environment.

Sustainable development is a development paradigm that integrates ecological, economic, and social dimensions (Wang, Chen, and Gill 2024) while balancing the needs of present and future generations. It is founded on the principle that development should meet present needs without compromising future generations' ability to meet their own (WCED 1987).

From an environmental ethics perspective, sustainable development is not merely a policy framework for reconciling economic growth with environmental protection. It also expresses a normative commitment to define the moral limits of human use of nature, to protect the ecological conditions necessary for the flourishing of present and future generations, and to prevent natural resources from being treated solely as instruments of unlimited economic expansion. In this sense, the effectiveness of sustainable development depends on the ethical principles by which societies distinguish legitimate needs from excessive consumption and responsible utilization from ecological exploitation.

Access to food, clothing, employment, and adequate housing constitutes the essential needs of all people. However, the fulfillment of needs beyond these basic necessities must remain within sustainable levels

of consumption that do not exceed the environment's ecological carrying capacity or compromise its regenerative capacity.

At the operational level, the Sustainable Development Goals (SDGs) articulate sustainable development, building on and expanding the Millennium Development Goals with a broader, more comprehensive framework. Accordingly, the SDGs serve as a framework for balancing environmental protection, economic development, and social inclusion, recognizing that progress in one dimension cannot be achieved at the expense of the others (Stafford-Smith et al. 2017).

Despite the adoption of numerous international climate change agreements, global efforts have yet to achieve substantial reductions in greenhouse gas emissions, particularly carbon dioxide (CO₂), the principal driver of anthropogenic climate change. According to the National Oceanic and Atmospheric Administration (NOAA), the global average atmospheric concentration of carbon dioxide rose from 418.76 parts per million (ppm) in October 2023 to 421.73 ppm in October 2024, and the 2025 annual average reached 427.09 ppm. During the seasonal peak in May 2025, atmospheric CO₂ concentrations exceeded 430 ppm for the first time, reaching 430.5 ppm and establishing a new historical record (Lan, Tans, and Thoning 2025). Similarly, the *Global Carbon Budget 2022* reported that carbon emissions from fossil fuel combustion have risen steadily over the past decades, increasing from an average of 3 billion metric tons of carbon (approximately 11 billion metric tons of CO₂) annually in the 1960s to 9.5 billion metric tons of carbon (approximately 35 billion metric tons of CO₂) annually during the 2010s (Friedlingstein et al. 2022). These trends indicate that existing governance mechanisms have not yet reduced carbon emissions to the required extent, while also intensifying international concern about atmospheric pollution and its implications for climate change (Wang and Huang 2022).

As a substantial proportion of the world's population depends on forest resources to meet basic livelihood needs, improving the welfare of rural communities and Indigenous Peoples remains a central objective of contemporary forest governance (Erbaugh and Oldekop 2018). Between 2015 and 2020, the global rate of deforestation was estimated at about 10 million hectares annually (FAO 2020). A global assessment of 192 coastal countries estimated that approximately 275 million metric tons of plastic waste were generated in 2010, of which between 4.8 and 12.7 million metric tons entered the oceans (Jambeck et al. 2015). Likewise, a study encompassing 104 countries found that rivers most severely polluted by pharmaceuticals are concentrated in low- and middle-income countries, highlighting persistent disparities in environmental

management and waste governance (Wilkinson et al. 2022).

In addition, land degradation caused by mining activities remains inadequately addressed, despite its potential to damage public infrastructure and impede sustainable development (Bouaziz and Benndorf 2024). Although mineral extraction is constitutionally recognized as a legitimate economic activity in nearly all Pan-Amazonian countries (Tanimoune and Haslam 2015), recent evidence from Brazil highlights the growing environmental and legal challenges associated with mining expansion. Between 1985 and 2022, the area occupied by industrial mining increased fivefold, from 360 km² to 1,800 km². During the same period, *garimpo* (artisanal and small-scale mining) expanded by approximately 1,200%, from 218 km² to 2,627 km², with 62% of these activities occurring within Indigenous territories. Moreover, at least 77% of extraction sites identified in 2022 exhibited clear indicators of illegality, with particularly severe impacts observed in the Indigenous territories of the Kayapó, Munduruku, and Yanomami peoples (Cortinhas Ferreira Neto et al. 2024).

Illegal mining, in particular, continues to undermine environmental sustainability and the rule of law. It is commonly associated with the encroachment upon protected areas, including Indigenous territories and conservation units in Brazil, the absence of formal mining documentation and environmental permits, the improper disposal of hazardous chemical contaminants, the illegal acquisition and use of mercury, the lack of environmental rehabilitation plans, the operation of informal mineral markets, adverse public health impacts such as malaria, intestinal infections, and chronic mercury poisoning, as well as profound social disruption affecting local and Indigenous communities (Urkidi and Walter 2011, 2017; Haslam and Tanimoune 2016).

Although environmental sustainability is a fundamental objective of sustainable development, environmental quality has continued to deteriorate despite the widespread adoption and promotion of sustainable development as a global policy framework, suggesting a persistent gap between normative aspirations and practical outcomes.

Accordingly, this study seeks to develop a conceptual framework for enhancing the effectiveness of sustainable development in promoting a healthy and sustainable environment. Specifically, it addresses two central questions: (1) What conceptual framework can enhance the effectiveness of sustainable development? and (2) How can such a framework be operationalized in the context of contemporary development? In answering these questions, the article turns to the customary institution of *Lubuk Larangan* and asks whether its principles can serve as general principles of environmental law.

1. Materials and Methods

This study applies a normative juridical method, examining law as a system of norms contained in legislation, legal principles, and doctrine. The analysis draws on secondary data collected through documentary research, comprising primary, secondary, and tertiary legal materials. Primary legal materials include the 1945 Constitution of the Republic of Indonesia, Law No. 32 of 2009 on Environmental Protection and Management, the report of the World Commission on Environment and Development, and the 2030 Agenda for Sustainable Development (United Nations 2015). Secondary legal materials comprise scholarly books, journal articles, research reports, and institutional publications on sustainable development and customary environmental law. Tertiary materials include legal dictionaries and encyclopedias.

The materials were analyzed qualitatively through historical, systematic, and sociological interpretation. Historical interpretation traces the development of the concept of sustainable development from the World Commission on Environment and Development report to the Sustainable Development Goals. Systematic interpretation situates the principle of non-excessive utilization within the wider body of Indonesian constitutional and environmental law, in particular Article 33(3) and Article 28H(1) of the 1945 Constitution. Sociological interpretation examines how the customary institution of *Lubuk Larangan* operates within the communities that practice it. The account of *Lubuk Larangan* given below rests on published ethnographic and legal studies of the Mandailing Natal, Rantau Kampar Kiri, and Tebo Mangku Setio Lantang communities. This article identifies the principles discussed through the method legal theory applies to find legal principles: it examines the concrete rules of *Lubuk Larangan* and abstracts the general ideas behind them. These principles are then read through natural law theory, which holds that the first principles of practical reason are common to all people, while the concrete rules derived from them vary with circumstances (Aquinas, *Summa Theologiae* I-II, q. 94, a. 4; q. 95, a. 2). The communities studied are not treated as representative of Indonesian customary law as a whole.

2. Results and Discussion

2.1. Environmental Utilization Practices of Indigenous Communities

Research on the environmental wisdom of Indigenous Peoples in Indonesia reveals several distinctive customary practices for protecting and sustainably managing natural resources. One such practice is the *Lubuk Larangan* customary institution, which embodies a community-based system for regulating inland fisheries in

an environmentally sustainable manner. *Lubuk Larangan* governs fishing activities in designated deep sections of rivers (*lubuk*) by imposing temporal restrictions on resource extraction. Fishing is prohibited within these designated areas until the customary leader formally declares the *Lubuk Larangan* open. In most communities, the prohibition remains in force for approximately one year, with fishing permitted within the designated area only once annually, typically during the dry season (Putra 2025).

The *Lubuk Larangan* customary law establishes several prohibitions to ensure the sustainability of fish populations and aquatic ecosystems. Community members are prohibited from fishing during the closure period, using fishing nets with excessively small mesh sizes, harvesting fish in excessive quantities, or employing destructive fishing methods. Under this customary regime, each fisher may cast a net only once, and the catch from that single cast is considered the fisher's rightful share. When an individual secures an abundant catch, however, the customary norms require that it be shared with other community members who were less fortunate, thereby reinforcing the principles of moderation, equity, and collective responsibility in the utilization of natural resources (Imamulhadi 2011). Consistent with the customary wisdom underpinning the *Lubuk Larangan* tradition, community members are prohibited from harvesting fish beyond their reasonable needs, even when fish stocks remain abundant (Imamulhadi 2011, 2016).

Customary ceremonies mark the establishment and opening of a *Lubuk Larangan* and reinforce the institution's legal and cultural legitimacy. During the establishment ceremony, the customary leader recites prayers, oaths, and ritual incantations regarded as binding on all community members.

The *Lubuk Larangan* customary institution continues to be practiced by several Indigenous communities, including the Mandailing Natal community in North Sumatra, the Rantau Kampar Kiri community in Kampar Regency, Riau, and the Tebo Mangku Setio Lantang community across the regencies of Bungo, Merangin, Muaro Jambi, and Sarolangun in Jambi Province. Today, non-community members may participate, provided they comply with customary prohibitions and make a financial contribution, with the proceeds allocated to the village fund (Imamulhadi 2016; Sondri 2021).

The *Lubuk Larangan* system represents a sustainable model of inland fisheries management (Permatasari et al. 2024). The prohibition on using fishing nets with excessively small mesh sizes allows juvenile fish to mature and reproduce before being harvested, thereby supporting the long-term sustainability of fish populations. In addition, the customary restriction limiting each fisher to a single cast of a fishing net, together with the obligation to share abundant catches with less fortunate community members, reflects a

philosophy of moderation in natural resource use and discourages excessive exploitation.

These customary practices embody local wisdom grounded in profound ethical and philosophical values (Imamulhadi et al. 2025). They articulate fundamental principles governing the relationship between human beings and the environment. The first is the principle of non-excessive utilization, which requires that natural resources be used only to the extent necessary to satisfy reasonable needs. When the *Lubuk Larangan* is opened, the customary maxim, "one cast is your fortune, and share it with others," conveys the belief that individuals should accept whatever provision they receive with gratitude and regard it as sufficient. The second is the principle of sufficiency, which the same maxim expresses by asking the fisher to regard the catch of one cast as enough. The third is the principle of simplicity, which concerns the way of life that makes it possible for the person who uses resources to stop at what is enough. The meaning of these principles is set out in Section 2.3.

From an environmental perspective, the pursuit of excessive material accumulation places considerable pressure on natural ecosystems and risks exceeding their ecological limits. Such patterns of resource exploitation may undermine the environment's regenerative capacity, accelerate biodiversity loss, and threaten the survival of vulnerable species. The principle of non-excessive utilization therefore serves as a normative restraint on excessive consumption and resource exploitation.

In many industrial economies, business practice sets no internal limit on corporate profit growth. Once a profit target has been achieved, it commonly serves as the basis for establishing even higher targets in subsequent years. Such a pattern reflects the prevailing business practice of continuous expansion and profit maximization, whereby commercial success is measured through sustained growth rather than the attainment of sufficiency.

Although this pattern of corporate behavior is widely accepted within the business sector, it raises significant concerns from the perspective of environmental sustainability. When production expansion exceeds the environment's ecological carrying capacity, it increases the risk of resource depletion and ecological degradation. The resource use driven by the pursuit of profit should therefore be subject to limits. Section 2.4 explains the normative level at which each of these limits operates.

The WCED definition of sustainable development contains two key concepts: "the concept of needs, in particular the essential needs of the world's poor, to which overriding priority should be given, and the idea

of limitations imposed by the state of technology and social organization on the environment's ability to meet present and future needs" (WCED 1987, p. 43). Together, these concepts imply that sustainable development requires limits on the use of natural resources. Without such limits, its objectives become much harder to realize.

The principles of non-excessive utilization and sufficiency in natural resource use embodied in the *Lubuk Larangan* customary tradition are closely aligned with the normative foundations of sustainable development as articulated by the WCED. This article proposes that recognizing these principles in law can strengthen the realization of sustainable development.

The principle of non-excessive utilization also requires limits to be placed on the nature and extent of human needs. Essential needs, including food, clothing, employment, and adequate housing, form part of the fundamental interests that society should seek to fulfill. By contrast, consumption that fails the generalizability test set out in Section 2.3 falls outside reasonable needs. Luxury and ultra-luxury consumption, whose main function lies in status or display, are the clearest examples of such consumption (Bourban 2025).

The expansion of Indonesia's oil palm plantation industry illustrates the environmental and social implications of resource exploitation driven by economic interests. According to the Indonesian Forum for the Environment (Walhi), approximately 7.3 million hectares of forest have been converted for other uses, with around 70% of this area allocated to oil palm plantations (Walhi 2025). Numerous species have lost habitat, most notably orangutans, whose forest habitat and primary food sources have been extensively cleared and converted into plantations (Meijaard et al. 2020). Research further indicates that approximately 100,000 orangutans in Kalimantan were killed between 1999 and 2015, with deforestation and oil palm expansion identified as major contributing factors (Gill 2018). The Awyu people of Papua and the Orang Rimba community in Tebo Regency, Jambi, are among the Indigenous groups whose customary forests and traditional livelihoods have been replaced by oil palm plantations (Arif 2025). This example does not show that the pursuit of profit alone causes deforestation, since land governance, environmental law enforcement, and global market demand also play a part. It illustrates how resource use driven by economic returns can exceed ecological limits where no effective limit applies.

Sustainable development would therefore benefit from a model of natural resource use founded upon the principle of non-excessive utilization, from which the principles of sufficiency and simplicity are derived. When these three interrelated principles guide resource use, development is more likely to remain within

ecological limits while promoting social justice and intergenerational equity.

2.2. From *Lubuk Larangan* to General Principles of Environmental Law

The principles identified above were found in a particular customary institution. This article proposes them as general principles of environmental law that can apply beyond the communities in which they were found. The move from a local practice to a general principle needs justification, because *Lubuk Larangan* operates in small river communities whose members know one another, share customary and religious beliefs, and can see what each fisher takes from the river. A national economy, or a corporation that extracts minerals or converts forest, does not share these features.

The justification begins with the distinction between a legal principle and a concrete rule. A legal principle is the general idea behind concrete rules that gives them direction, and it is found by examining concrete rules and abstracting what they have in common (Mertokusumo 2003). The rules of *Lubuk Larangan* on the closure period, the single cast of the net, the ban on small-mesh nets, and the duty to share an abundant catch belong to a particular river, a particular fish population, and a particular community. The principles behind them are not tied to these conditions. The ideas of taking no more than one needs, of accepting what is enough as enough, and of living without excess do not depend on the river, the fish, or the ceremony that opens the *lubuk*. The article therefore proposes the principles for general application, while the concrete rules remain with the communities that made them. Each legal order has to give the principles its own concrete form, in line with the transformation model developed in earlier work on Indonesian customary environmental law (Imamulhadi et al. 2025).

Natural law theory explains why principles found in one community can claim universal validity. The first principles of practical reason are the same for all people and are knowable by all, while the specific conclusions and rules drawn from them vary with conditions and circumstances (Aquinas, *Summa Theologiae* I-II, q. 94, a. 4). Human law gives these principles concrete form through determinations suited to a particular community (Aquinas, *Summa Theologiae* I-II, q. 95, a. 2). *Lubuk Larangan* is one such determination. Its value as a source lies in showing that a community has recognized the principles, turned them into binding rules, and sustained a shared resource with them over many years.

The presence of similar principles across other traditions supports their claim to universality. Customary communities elsewhere in Indonesia, including those that practice *sasi* in Maluku and the

Panglima Laot institution in Aceh, forbid destructive and excessive harvesting of marine resources. Comparable customary restrictions on the use of forests and wildlife have been documented among the Karen in Thailand and the Nung in Vietnam (Imamulhadi et al. 2025). Islamic environmental teaching prohibits waste and excess in the use of what nature provides (Imamulhadi 2016). In the natural law tradition, avarice is the desire for external goods beyond the measure a person needs (Aquinas, *Summa Theologiae* II-II, q. 118, a. 1). International environmental law has moved in the same direction. Principle 8 of the Rio Declaration calls on States to reduce and eliminate unsustainable patterns of production and consumption (United Nations 1992), and Goal 12 of the 2030 Agenda commits States to sustainable consumption and production patterns (United Nations 2015).

The principles apply wherever three conditions hold. First, the resource is finite and depends on regeneration, so that use above a certain level reduces what remains for others and for later users. Second, the costs of excessive use fall on persons other than the user, including future generations. Third, an authority exists that is entitled to set limits on use on behalf of the community. Fish in a *lubuk* meet these conditions, and so do forests, river basins, marine fisheries, and mineral-bearing land. In Indonesia, Article 33(3) of the 1945 Constitution meets the third condition by placing natural resources under State control for the greatest prosperity of the people. The State thus holds a position comparable to that of the customary leader who closes and opens the *lubuk*. Research on common-pool resources supports this form of generalization: rules that succeed in local commons cannot simply be scaled up, but the principles behind them can guide institutions nested at higher levels of governance, provided the rules are fitted to local conditions (Ostrom 1990).

A principle does not enter positive law merely by being proposed. Its recognition depends on lawmakers, courts, and legal scholarship within each legal order. Where that recognition has not yet occurred, the three principles still serve as a normative concept that guides the drafting, revision, and interpretation of environmental legislation. The precautionary principle followed this path: it began as a policy idea, was declared in Principle 15 of the Rio Declaration (United Nations 1992), and now stands among the principles of Indonesian environmental law (Republic of Indonesia 2009, Article 2). This article offers non-excessive utilization, sufficiency, and simplicity with the same aim.

2.3. Key Concepts and Criteria

The argument of this article relies on five concepts: non-excessive utilization, sufficiency, simplicity, reasonable needs, and luxury. The article does not propose universal definitions of reasonable needs or luxury. The meanings set out below apply within this article, and their concrete content has to be settled by each society in light of its social, economic, and cultural conditions.

Non-excessive utilization refers to the use of natural resources that stays within two limits at once. The first limit is set by reasonable needs: use becomes excessive when it goes beyond what those needs require. The second limit is ecological: use becomes excessive when it exceeds the environment's carrying capacity or the resource's regenerative capacity, even when the purpose of the use is legitimate. Indonesian law already recognizes the second limit through the concepts of environmental carrying capacity and assimilative capacity (Republic of Indonesia 2009, Article 1 points 7 and 8, and Article 12). The first limit is what *Lubuk Larangan* adds. A fisher who casts the net a second time breaks the customary rule even when the *lubuk* is full of fish.

Reasonable needs are those whose satisfaction is required for a dignified life in a given society, at a level that could be extended to all members of that society within ecological limits. The definition contains two tests. The dignity test sets a floor and covers the needs that the WCED and later work on human need treat as essential, including food, clean water, sanitation, housing, healthcare, education, energy, and decent work (WCED 1987; Doyal and Gough 1991; Rao and Min 2018). The generalizability test sets a ceiling. A level of consumption that could not be made available to everyone without exceeding ecological limits falls outside reasonable needs, however common it has become among affluent groups. Both the floor and the ceiling differ between societies and change over time: adequate housing in a village in Jambi is not the same as adequate housing in Jakarta or Warsaw. This dependence on context has a long history in natural law thought, where the measure of external goods a person may rightly seek is what that person needs to live in keeping with his or her condition of life (Aquinas, *Summa Theologiae* II-II, q. 118, a. 1).

Sufficiency names the condition in which reasonable needs are met, and the principle that directs users of resources to stop at that condition. The concept is close to the idea of consumption corridors, which place a floor of need satisfaction beneath a ceiling of excess that cannot be generalized (Fuchs et al. 2021; Bärnthaler 2024). It also corresponds to the IPCC's description of sufficiency policies as measures and daily practices that avoid demand for energy, materials, land, and water while delivering well-being for all within planetary boundaries (IPCC 2022).

Simplicity refers to a way of living in which people seek well-being by satisfying reasonable needs rather than accumulating goods. Simplicity differs from poverty, which is the inability to meet reasonable needs (Osikominu and Bocken 2020; Druică, Vâlsan, and Puiu 2022). The three principles form a sequence. Non-excessive utilization sets the limit on what is taken from nature, sufficiency marks the point at which enough has been taken, and simplicity describes the way of life that makes it possible to stop at that point.

Luxury refers to goods and services whose main function lies in display, status, or exclusivity, and whose resource demands exceed what reasonable needs require. A high price alone does not make a good a luxury. What matters is the need the good serves and whether everyone could bear its resource burden, following the distinction between subsistence emissions and luxury emissions in climate ethics (Shue 1993).

The article uses four criteria to distinguish use that meets reasonable needs from excessive use. The first criterion concerns function and asks whether the use serves a reasonable need, directly or as a necessary means to it. Building materials for adequate housing meet this criterion, while materials for a palace-scale private residence do not. The second criterion concerns generalizability and asks whether the level of use could be extended to all members of the society concerned within ecological limits. A single cast in *Lubuk Larangan* meets this criterion, while routine private helicopter travel does not. The third criterion concerns the ecological limit and asks whether the use stays within the environment's carrying capacity and the resource's regenerative capacity, as expressed in quality standards, quotas, or spatial plans. Timber harvesting within the annual allowable cut meets this criterion, while clearing beyond it does not. The fourth criterion asks whether a less resource-intensive way of meeting the same need is reasonably available. Public transport or an efficient car meets the need for mobility with a smaller burden than a high-consumption vehicle valued mainly for prestige.

A use that fails the third criterion is excessive, whatever its purpose. The first, second, and fourth criteria are applied together and depend on context. In *Lubuk Larangan* the community, acting through its customary leader, gives these criteria their content. At the state level, that content should be fixed through democratic lawmaking informed by scientific evidence and the knowledge of affected communities, including Indigenous Peoples.

2.4. Normative Status of the Principles and Proposals

The proposals in this article do not all carry the same normative force. This section distinguishes four levels at which they operate and states the conditions under which a proposal may move from one level to the next. The distinction matters most for the central claim of the article, namely that non-excessive utilization, sufficiency, and simplicity are legal principles.

The first level is the *ethical principle*. An ethical principle binds persons in conscience and guides their judgment, but no public authority enforces it. The three principles have an ethical root, and in *Lubuk Larangan* they are also customary law, because the community attaches sanctions to them. The second level is *public policy direction*. A policy direction indicates where the State's planning, fiscal, industrial, and educational choices should lead. It shapes the use of public discretion but does not by itself create rights or duties for citizens or corporations.

The third level is the *legal principle*. A legal principle is recognized by positive law or proposed for such recognition. It does not prescribe specific conduct or attach a sanction. Lawmakers, courts, and administrators use it to shape legislation, interpret statutes, guide discretion, and review the legality of decisions. The three principles are proposed at this level. Indonesian law already contains principles close to them. Article 33(4) of the 1945 Constitution requires the national economy to be organized according to the principles of sustainability and environmental perspective, and Article 2 of Law No. 32 of 2009 lists sustainability and local wisdom among the principles of environmental protection and management (Republic of Indonesia 1945; Republic of Indonesia 2009). The Constitutional Court measures whether natural resources are used for the greatest prosperity of the people by four benchmarks: the benefit of the resources for the people, the equitable distribution of that benefit, public participation in deciding on that benefit, and respect for the hereditary rights of the people to use those resources (Constitutional Court of the Republic of Indonesia 2010).

The fourth level is the *legal obligation*. A legal obligation identifies an addressee, prescribes or prohibits specific conduct, and attaches a sanction to its breach. Legal principles and legal obligations differ in kind. Recognizing the three principles as legal principles does not turn every idea connected with them into an enforceable duty.

Natural law theory explains how higher levels give rise to lower ones. Human law derives from natural law either as a conclusion drawn from a general principle or as a determination that gives the principle concrete

form (Aquinas, *Summa Theologiae* I-II, q. 95, a. 2). The same tradition limits what human law should attempt. Human law does not command every virtue or forbid every vice. It restrains the graver wrongs, above all those that harm others, and it takes account of what most people can observe (Aquinas, *Summa Theologiae* I-II, q. 96, a. 2). The article combines this limit with the requirements of positive law. A proposal reaches the level of legal obligation only where four conditions are met: the conduct causes identifiable harm to others or to the environment; the conduct can be defined with the precision the principle of legality demands; a measurable standard exists or can be set, such as a quota, a quality standard, or a carrying capacity threshold; and the obligation is proportionate to the harm it addresses. Where these conditions are not met, the proposal operates as a legal principle, a policy direction, or an ethical principle. The following paragraphs apply this structure to the proposals of the article.

The principles of non-excessive utilization, sufficiency, and simplicity are proposed as legal principles. Where a legal order has not yet recognized them, they function as a normative concept, and at root they remain ethical principles. They are addressed to lawmakers, courts, and administrators, and through them to all users of natural resources. Their basis in Indonesian law lies in Articles 28H(1), 33(3), and 33(4) of the 1945 Constitution, Articles 2 and 12 of Law No. 32 of 2009, and Constitutional Court Decision No. 3/PUU-VIII/2010.

Limits on resource extraction and conversion are legal obligations. They bind holders of resource-use permits and take the form of quotas, the annual allowable cut, gear restrictions, carrying capacity thresholds, spatial plans, and permit conditions. The principle of limiting profit to reasonable bounds operates as a legal principle applied through these limits on resource use, as a policy direction, and as an ethical principle. It is addressed to corporations and to the State, and it works through royalties, resource rent taxation, and benefit-sharing, without a statutory numerical ceiling on profit (see Section 2.5).

Restraint in the production and consumption of luxury goods is a policy direction addressed to producers, consumers, and the State. It becomes a legal obligation only where production breaches environmental law, and its instruments include the Sales Tax on Luxury Goods, conservation law governing protected species, and public procurement rules (see Section 2.6). Simplicity in ways of living is a legal principle addressed to the State and an ethical principle for individuals. It shapes environmental, consumer, and fiscal legislation as well as environmental education, without creating an enforceable duty on individuals (see Section 2.8). Sharing is a complementary principle and a policy direction addressed to profitable

corporations and to the State. Its legal foundation lies in the corporate social and environmental responsibility required of companies in the natural resource sector (Republic of Indonesia 2007, Article 74), and its proposed form is an inter-corporate solidarity fund (see Section 2.8).

This structure also clarifies what the article adds to the literature on sufficiency and sustainable consumption. Much of that literature has grown out of ecological economics, degrowth scholarship, and consumer research in industrialized countries, and it often observes that the operational meaning of sufficiency remains unsettled (Princen 2005; Lorek and Spangenberg 2014; Jungell-Michelsson and Heikkurinen 2022). The article contributes in three respects. It grounds sufficiency in a customary legal institution that limits resource use and has enforced that limit over generations. It proposes sufficiency, together with non-excessive utilization and simplicity, as a legal principle, and it uses natural law theory to identify which parts of the sufficiency agenda belong to law and which belong to policy and ethics. It also treats the sharing of surplus as part of sufficiency, a link that *Lubuk Larangan* makes explicit and that recent arguments for limits on excessive wealth also draw (Robeyns 2024; Bourban 2025).

2.5. Limiting Profit to Reasonable Bounds through Limits on Resource Use

The exploitation of natural resources may be justified only insofar as it serves the fulfillment of legitimate human needs. Within the framework of sustainable development, these needs include access to clean water, nutritious food, sanitation, adequate housing, quality education, decent work, sufficient energy, and healthcare. These constitute the essential conditions for a dignified standard of living and are needs that may reasonably be aspired to by all members of society.

Likewise, corporate profit generated through economic activities aimed at meeting these essential human needs should be regarded as legitimate and not inherently excessive. Consequently, the costs associated with fulfilling essential human needs, together with the supporting infrastructure required to deliver them, may serve as a normative benchmark for judging whether profit remains within reasonable bounds, given the ecological constraints of sustainable development.

This benchmark is not a numerical ceiling on profit fixed by statute. A statutory ceiling would be hard to define, would also apply to activities that cause no environmental harm, and would not, by itself, reduce resource use. The natural law tradition does not condemn gain as such. It accepts gain that is moderate and directed to a proper end, such as supporting a household, helping those in need, or serving the public good

(Aquinas, *Summa Theologiae* II-II, q. 77, a. 4).

The principle of limiting profit to reasonable bounds therefore works through three channels. As an ethical principle, it asks corporations to measure success by more than continued growth in returns from resource extraction. As a policy direction, it supports instruments that capture part of the returns from natural resources for public purposes, such as royalties and resource rent taxation, together with benefit-sharing with affected communities. As a legal principle, it guides the setting of concrete legal limits on resource use itself, through extraction quotas, carrying capacity thresholds, spatial plans, and permit conditions. In this way the legal limit falls where environmental harm occurs.

The establishment of normative limits is essential to regulate corporate behavior that is driven by the continual pursuit of higher profits and by patterns of consumption characterized by ever-expanding human wants. Consequently, moderating and regulating the expansion of human wants is an important condition for achieving sustainable development (Princen 2005; Hickel 2019). From this perspective, exploiting natural resources to satisfy non-essential needs that not all members of society can reasonably aspire to is inconsistent with the ethical principles of sustainable environmental governance.

2.6. Restraining the Production and Consumption of Luxury Goods

It is important to reiterate that the concept of sustainable development, as articulated by the WCED, recognizes the legitimacy of exploiting natural resources to satisfy essential human needs, including access to clean water, nutritious food, sanitation, adequate housing, quality education, decent work, sufficient energy, and healthcare. At the same time, the WCED framework does not justify forms of consumption that not all members of society can reasonably aspire to. These two propositions constitute fundamental normative premises of sustainable development. Forests, mountains, agricultural land, oceans, and other environmental resources should not be degraded merely to produce luxury goods.

As noted in Section 2.3, manufacturing vehicles designed to provide safe, reliable, and comfortable transportation serves a legitimate social function and cannot be considered excessive. By contrast, producing goods whose primary value lies in luxury or prestige reflects forms of consumption that not all members of society can reasonably attain and therefore entails an unnecessary use of finite natural resources. Similarly, producing construction materials for clean, healthy, safe, and adequate housing is consistent with legitimate human needs, whereas allocating environmental resources to construct extravagant private residences

comparable to palaces represents an inefficient and ethically questionable use of natural resources (Wiedmann et al. 2020). Environmental degradation cannot be ethically justified when it serves only non-essential, luxury consumption.

This restraint operates at more than one normative level. The judgment that nature should not be degraded for prestige is ethical, and gives direction to policy. The article does not propose a general legal prohibition on luxury goods, because the concept of luxury cannot be defined with the precision a prohibition would require, and because not every luxury purchase harms the environment. Indonesian law already follows a graded approach. The Sales Tax on Luxury Goods imposes higher rates on goods classified as luxuries (Republic of Indonesia 1983), and conservation law prohibits trade in protected species, many of which are sold as luxury products (Republic of Indonesia 1990). The principle of non-excessive utilization supports extending this graded approach through economic instruments that reflect the resource burden of luxury goods, through public procurement rules, and through legal prohibition where producing a good requires a breach of environmental law, for example by sourcing materials from protected areas.

2.7. Non-Excessive Utilization as a Legal Principle and Its Concrete Legal Duties

The limitations and prohibitions discussed above are more likely to be observed if natural resources are utilized in accordance with the principles of sufficiency and non-excessive utilization. Accordingly, a normative obligation to use environmental resources only to the extent necessary provides the basis for limits on profit-driven resource use and for restraint in the production and consumption of goods whose primary function is to satisfy luxury and extravagance. Such a pattern of resource use reflects a genuinely sustainable model of development, as it embodies the normative principles implicit in the concept of sustainable development formulated by the WCED.

As a legal principle, non-excessive utilization guides the interpretation of environmental and natural resource legislation and the exercise of licensing discretion. It gives rise to concrete legal duties when lawmakers and administrators express it in measurable standards that bind holders of resource-use permits: extraction quotas, the annual allowable cut, fishing quotas and gear restrictions, carrying capacity thresholds in environmental protection and management plans, and permit conditions. Several of these instruments already exist. The prohibition in Indonesian fisheries law on fishing gear that damages the sustainability of fish resources expresses in state law the same concern as the customary ban on small-mesh nets in *Lubuk*

Larangan (Republic of Indonesia 2004, Article 9). The principle adds the question of need to the question of ecological capacity when such standards are set and when permits are granted.

When natural resources are utilized mainly to satisfy essential needs, such as access to clean water, nutritious food, sanitation, adequate housing, quality education, decent work, healthcare, and sufficient energy, the resulting environmental burden is more likely to remain within the carrying and assimilative capacities of ecosystems. Wasteful exploitation increases that burden without a matching gain in human well-being, and over time it endangers ecological integrity and human welfare.

Technological advancement likewise need not have adverse environmental consequences if it is developed and applied primarily to support the fulfillment of essential human needs. However, when technological innovation is directed toward facilitating excessive exploitation of natural resources or stimulating unsustainable patterns of consumption, it can contribute to environmental degradation and endanger long-term human well-being.

2.8. Simplicity and Sharing as Principles of Environmental Law

If the concept of sustainable development were distilled to its most fundamental principles, simplicity should be regarded as one of its core foundations. Individuals who embrace a simple way of life are more likely to adopt environmentally responsible behavior. Their understanding of well-being is not measured by the accumulation of wealth or the quantity of goods consumed, but by access to freedom, security, health, comfort, and the fulfillment of essential human needs (Osikominu and Bocken 2020).

A simple way of life, however, should not be equated with poverty or deprivation. Rather, poverty is characterized by the inability to satisfy these essential needs (Druică, Vâlsan, and Puiu 2022). Sustainable development does not seek to perpetuate poverty; instead, it requires that every individual be able to achieve a dignified standard of living by fulfilling essential needs. Simplicity is therefore closely tied to sufficiency: a simple way of life is one that stops at what is sufficient (see Section 2.3).

Environmental legislation should encourage patterns of resource utilization that promote moderation, discourage excessive consumption, and foster satisfaction with the fulfillment of essential needs.

As a legal principle, simplicity is addressed mainly to the State. It should guide environmental, consumer, and fiscal legislation, as well as public infrastructure planning, so that ways of living that use fewer resources become easier to choose. The article does not propose an enforceable legal duty on individuals to

live simply. Such a duty could not be defined with the precision the principle of legality requires, and it would reach too far into private life. The natural law tradition supports this restraint, since human law does not compel every virtue and restrains chiefly the graver wrongs that harm others (Aquinas, *Summa Theologiae* I-II, q. 96, a. 2). For individuals, simplicity remains an ethical principle, which the State can support through environmental education and accurate consumer information (Lorek and Spangenberg 2014; Jungell-Michelsson and Heikkurinen 2022).

In addition to the principle of non-excessive utilization, the customary wisdom embodied in the *Lubuk Larangan* tradition also advances the principle of sharing. The principle of sharing encourages enterprises that benefit economically to provide support for those experiencing financial hardship.

Assistance provided by profitable enterprises may help prevent layoffs that commonly result from corporate financial losses. Since unemployment is closely associated with increased risks of poverty and social vulnerability, preventing unnecessary job losses is consistent with the social objectives of sustainable development.

If the customary maxim of *Lubuk Larangan*, "one cast is your fortune, and share it with others", were incorporated into contemporary environmental governance, it could be operationalized through the establishment of inter-corporate solidarity funds. This is a policy proposal. Its closest legal foundation in Indonesia is the obligation of companies whose business relates to natural resources to carry out social and environmental responsibility (Republic of Indonesia 2007, Article 74), and its design, including who contributes and who benefits, requires further legal study.

2.9. A Framework for Enhancing the Effectiveness of Sustainable Development

Based on the foregoing analysis, this study proposes a framework for sustainable natural resource utilization grounded in the principle of non-excessive utilization. This framework incorporates the principles of sufficiency, simplicity, and sharing. Non-excessive utilization, sufficiency, and simplicity are proposed as general principles of environmental law, while sharing operates as a complementary principle and policy direction. These principles give rise to concrete legal duties for holders of resource-use permits, to limits on profit-driven resource use, and to policies that restrain luxury consumption and support simple living, each at the normative level set out in Section 2.4.

Although sustainable development has become the dominant paradigm for balancing economic growth with environmental protection, its implementation has not sufficiently prevented environmental degradation. The article suggests that one contributing factor is that prevailing approaches have not fully embraced the WCED's foundational premise that the use of natural resources should be limited to the satisfaction of reasonable needs that are attainable by all members of society.

The implementation of this framework, inspired by the customary wisdom of Indonesian Indigenous communities, requires states to recognize non-excessive utilization, sufficiency, and simplicity as general principles of environmental law, while incorporating sharing as a complementary principle and policy direction within sustainable development.

The Constitution of the Republic of Indonesia authorizes the State to exercise control over natural resources to ensure that they are utilized for the greatest benefit of the people (Republic of Indonesia 1945). The constitutional right to a good and healthy environment therefore serves as an essential counterbalance to natural resource exploitation (Republic of Indonesia 1945, Article 28H(1); Republic of Indonesia 2009, Article 65(1)).

Within this constitutional framework, principles that limit resource use to reasonable needs, together with policies that restrain resource-intensive luxury consumption, are consistent with Article 33 of the 1945 Constitution as interpreted by the Constitutional Court, which measures the use of natural resources by their benefit to the people, the equitable distribution of that benefit, public participation, and respect for the hereditary rights of communities (Constitutional Court of the Republic of Indonesia 2010).

Conclusions

This study examined one factor underlying the limited effectiveness of sustainable development in addressing environmental degradation, proposed a normative framework to enhance its implementation, and explored its application within contemporary environmental governance. The analysis gives rise to four principal conclusions.

First, the study offers an interpretation of one factor behind the limited effectiveness of sustainable development: natural resource use driven by profit and by non-essential consumption has seldom been measured against reasonable needs, even though the WCED gave essential needs a central place in its definition. Where this happens, the economic dimension of sustainable development tends to prevail over its

ecological and social dimensions. The study does not claim that this factor alone explains environmental degradation. Weak law enforcement, poverty, governance failures, and global market demand also contribute, and their relative weight calls for empirical research.

Second, this study proposes a normative framework to enhance the effectiveness of sustainable development by incorporating the principle of non-excessive utilization, derived from the customary wisdom of the *Lubuk Larangan* tradition. The principles of non-excessive utilization, sufficiency, and simplicity were found in the concrete rules of *Lubuk Larangan* and are proposed as general principles of environmental law. Their claim to universality rests on natural law theory and on parallels in other traditions, and they apply wherever a resource is finite, the costs of excessive use fall on others, and an authority exists to set limits. The concrete customary rules themselves are not proposed for direct application at the national scale. The principle of non-excessive utilization should be implemented in conjunction with the principles of sufficiency and simplicity and the complementary principle of sharing, thereby promoting a more balanced relationship between economic development, environmental protection, and social justice.

Third, from the perspective of environmental ethics, this framework offers a normative account of the limits that should govern human appropriation of the natural world. It redefines sustainable development not as the indefinite expansion of environmentally moderated growth, but as development constrained by sufficiency, ecological responsibility, and justice in the distribution of natural resources. The principle of non-excessive utilization may therefore be understood as an ethical bridge between Indigenous environmental wisdom and contemporary debates on the moral limits of production, consumption, and economic growth.

Finally, implementing this framework requires corresponding legal and institutional reforms. As legal principles, the three principles can guide the drafting and interpretation of environmental legislation, including Article 33 of the 1945 Constitution and Law No. 32 of 2009. They become concrete legal obligations where harm can be identified, and measurable standards can be set, chiefly through quotas, carrying capacity thresholds, and permit conditions. Limits on profit, restraint in luxury consumption, and simple living operate mainly through such limits on resource use, through policy, and through ethical commitment. Where legal recognition has not yet occurred, the principles serve as a normative concept for legal reform. Through the integration of these customary principles into contemporary environmental governance, sustainable development can be more effectively aligned with its original objective of achieving ecological integrity,

social equity, and long-term environmental sustainability. Whether the framework improves environmental outcomes in practice remains a question for further legal and empirical research.

Statements

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The authors declare no conflicts of interest.

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