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Sustainable Development as a Principle of International Law

An Analysis Based on the Jurisprudence of the International Court of Justice

El desarrollo sostenible como principio del derecho internacional. Un análisis basado en la jurisprudencia de la Corte Internacional de Justicia

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Abstract | The International Court of Justice (ICJ) and scholars in international law have long operated within the framework of the principle of sustainable development. It can be argued that this concept has by now attained recognition as a principle of international law. A legal institution may emerge from "legal facts and arguments", including the dissenting opinions of the International Court of Justice, which although non-binding, can nevertheless influence the formation and evolution of international legal principles over time. Such is the case with the principle of sustainable development. This article addresses the construction of the principle of sustainable development in the jurisprudence of the ICJ—from its origins in a dissenting opinion to its consolidation as a principle of international law. The methodology used in this contribution is legal in nature, based on systematic research on history, doctrine and case law, and carried out through a qualitative approach.

Keywords | sustainable development, legal principles, international law, jurisprudence

Resumen | La Corte Internacional de Justicia (CIJ) y los académicos en derecho internacional han trabajado durante mucho tiempo en el marco del principio del desarrollo sostenible. Se puede argumentar que este concepto ha sido reconocido como un principio. Una institución jurídica puede surgir de "hechos y argumentos jurídicos", incluidas las opiniones disidentes" de la Corte Internacional de Justicia que, aunque no son vinculantes, pueden influir en la formación y la evolución de los principios internacionales a lo largo del tiempo. Este es el caso del principio del desarrollo sostenible. El presente artículo aborda la construcción del principio del desarrollo sostenible en la jurisprudencia de la CIJ: de una opinión disidente a un principio. La metodología utilizada en esta contribución es jurídica, basada en una investigación sistemática sobre la historia, la doctrina y la jurisprudencia con un enfoque cualitativo.

Palabras clave | principios legales, derecho internacional, desarrollo sostenible, jurisprudencia

1. Introduction

Sustainable development (SD) was originally formulated as a doctrinal concept (Gu, 2014); (Schachter, 1992); (Friedmann, 1963)[1]. Nevertheless, the concept of SD was coined in 1987 in the reports of the World Commission on Environment and Development (Sands et al, 2018). The Commission's report defines sustainable development as development that "meets the needs of the present without compromising the ability of future generations to meet their own needs (...)" (World Commission on Environment and Development, 1987).

In addition, the United Nations Conference on Environment and Development (UNCED), held in Rio de Janeiro in 1992, established the most important principles of environmental law. The Rio Declaration on Environment and Development (Rio Declaration) brought the concept of sustainable development to the forefront, as the embodiment of a compromise between two—still competing—considerations: development (whether economic or social) and environmental protection (Viñuales, 2021). The Rio Declaration has also established the precautionary principle, the principle of common but differentiated responsibility, and the principle of public participation[2]. This contribution will focus specifically on the Principle of Sustainable Development (PSD).

SD has been considered part of International Law (IL) since the Gabcikovo Nagymaros case (GN)[3] and following the "separate opinion" of Judge Weeramantry[4]. However, the conceptual origins of SD can be traced back to the dissenting opinion of Judge Alvarez in the International Status of South West Africa Advisory Opinion, where the idea emerged from a primarily social and economic foundation, later evolving to include the current environmental element[5]. This concept has subsequently been considered in other judgements from the International Court of Justice (ICJ): Pulp Mills (PM)[6], Certain Activities Carried out by Nicaragua in the Border Area (CACNBA)[7], Construction of a Road in Costa Rica along the San Juan River (RCRSJR)[8], Aerial Herbicide Spraying (AHS)[9], Whaling in the Antarctic (WA)[10] and, most recently, the Advisory Opinion on the Obligations of States in Respect of Climate Change (OSCC)[11].

The PSD encompasses ideas related to international legal rules, and clarifies its core elements: environmental, social and economic international rights and obligations of international legal subjects, both States and individuals. An example of the relevance of SD is its role in the discovery of some of the effects of climate change (ECC), such as those associated with "El Niño" phenomenon, and in assessing the extent of its impact on biodiversity. This is particularly relevant given that biodiversity loss, driven in part by climate change and habitat degradation, threatens essential ecosystem services and the livelihoods of communities that depend directly on biological resources (Chaytor et al, 2002) In this context Traditional Knowledge (TK) has played a key role. The Convention on Biological Diversity (CBD)[12] expressly recognizes, in Article 8(j), the rights and obligations associated with the conservation and sustainable use of genetic resources, underscoring the importance of TK for biodiversity conservation.

The PSD is supported by several treaty provisions, judicial decisions, and academic work (Sands et al, 2018) and has become an established objective of the international community, acquiring normative status in international law (Schrijver y Weiss, 2002). However, the absence of an international treaty recognizing and protecting the PSD in the context of climate change (CC) remains a significant gap.

On the other hand, Traditional Knowledge constitutes a core element of the PSD, as framed by Weeramantry's theory of “legal construction” (Taylor, 1987). “Legal construction” refers to the manner in which the legal mind conceptualizes a legal institution. Such an institution emerges from the interaction of established “facts” and “arguments”, as exemplified in the GN case[13]. However, this concept predates its modern applications.

According to Weeramantry, TK must be employed to address the effects of climate change (and other environmental threats), whether these arise from global phenomena, such as El Niño, or from locally driven dynamics. Its integration enables forms of sustainable, context-specific resilience[14], as reflected in various international treaties and draft treaties[15].

TK contributes both to preventing the ECC and to understanding their underlying causes, recognizing that climate change constitutes an ongoing process of transformations that is difficult to halt. International law cannot adequately address the consequences of climate change through traditional doctrines such as *force majeure*; instead, effective responses must rely on mitigation and adaptation strategies. Within this context, TK can offer meaningful solutions to climate change and its impacts. Climate change has also altered conventional understandings of time and space, particularly with respect to the classification and foreseeability of its effects. Although scientific and legal communities acknowledge the existence and severity of climate change, debates concerning the ECC often focus either on the reversibility of certain impacts or on the possibility of slowing major climatic shifts, while recognizing the difficulty—if not impossibility—of fully preventing negative outcomes (Gitay et al, 2002); (Harley, 2011); (Dawson et al, 2011); (Lambers, 2015); (Terton et al, 2022). In both positions TK might propose solutions by establishing rights and obligations to confront the ECC.

The “legal construction” of SD has been shaped by the ICJ and the doctrinal contributions of international law scholars. This analytical framework draws substantially from the legal theories, providing foundational perspectives on normative systems and legal institutions[16]. Although the need to articulate rights and obligations within the concept of “sustainable development” is well established, questions remain regarding the internal structure of this principle and the specific nature of the rights and obligations it encompasses.

Our hypothesis is that the concept of Sustainable Development is inherently flexible and encompasses not only social and economic dimensions but also environmental ones, recognizing that economic growth is necessary, but cannot be pursued at the expense of social welfare or environmental protection.

To examine this hypothesis, a systematic analysis of the historical evolution, doctrinal development, and relevant jurisprudence has been undertaken. This research employs a qualitative methodological approach and draws on Grounded Theory, relying on debates, texts, and reasoning produced by leading actors and authorities in the field.

2. When was “sustainable development” formulated as a concept and subsequently articulated as a principle, and by whom ?

a. Social challenges

In his dissenting opinion, Judge Álvarez underscored the social dimension of what would later be understood as sustainable development—a point he further developed in his book *El nuevo derecho internacionalensusrelaciones con la vida actual de los pueblos* [The New International Law in Its Relations with the Current Life of Peoples] (1962). He emphasized that international relations were undergoing a profound transformation: shifting from a system centered exclusively on States to an "organized international society" composed not only of States but also of groups, associations of States, and other international entities.

According to Álvarez, the emerging body of international law must reflect a new "regime of interdependence", particularly "social interdependence". This regime aims to harmonize the rights of States, strengthen cooperation, and assign greater weight to shared interests that promote "cultural and social progress" and ultimately lead to "international social justice"[17].

Álvarez observed that obligations in international law now arise not only between States but also toward the international community as a whole. He argues that this new legal order reflects "the new requirements of the life of the peoples" and the emergence of modern social institutions, such as the International Labour Organization. Since 1945, the United Nations Charter, together with a vast number of international treaties, has reinforced this evolution toward more concrete and positive sources of law. This development contrasts with the classical international law, which relied mainly on abstract principles, doctrinal formulations, and customary rules, "many of them obsolete"[18].

The PSD was shaped by the International Court of Justice, as noted by Judge Álvarez[19], and has since been incorporated into various treaties and declarations. Over time, the principle has expanded to address new social problems, including environmental concerns. Following the Gabcíkovo-Nagymaros case, environmental protection became an essential dimension of the principle, reflecting the need to reconcile economic growth with human health and the preservation of nature. The emergence of issues, such as climate change and greenhouse gas emissions, further illustrates how the concept of sustainable development now encompasses interconnected social, economic, and environmental dimensions—each linked to human societies and their evolution at both the national and international levels.

b. From the Concept to the Principle

Sustainable development has been present in international law in a conceptual form since the 1950s, through the works of authors such as Alvarez Jofré[20], Weeramantry[21], (Schachter, 1992) and (Henkin, 1990), as well as through proposals such as "growth with equity" (Fajnzylber, 1989), "stability with growth" (Stiglitz et al, 2006). The concept gained further prominence with the emergence of conventions on biological diversity and climate change, which expressly or implicitly included the concept of "sustainable development". In this sense, SD may be understood as a legal construct that integrates three fundamental dimensions: environmental protection, economic development, and social welfare. The regulatory frameworks addressing these dimensions have been referred to, within international law (IL), as the "international law of sustainable development," and, in broader terms, as "sustainable development law" (Cordonier Segger y Khalfan , 2004).

Beyond its foundations in international legal scholarship, sustainable development formally recognizes TK from Indigenous Peoples and Local Communities as a core element of its normative framework. This integration is particularly evident in the Convention on Biological Development[22], where traditional knowledge is conceptualized as Knowledge, Innovation and Practices.

Such knowledge is both rich and valuable, since it might become an economic benefit or serve as an asset on its own. At the same time, this TK has been employed to understand the effects of climate change, such as El Niño phenomenon, and most probably, will continue to help in such endeavor.

Furthermore, Traditional Knowledge contributes to the Principle of Sustainable Development in several meaningful ways. Within TK, one can identify a line of reasoning that aligns with the core objectives of SD, particularly with respect to preventing adverse consequences for human beings and the environment. A clear illustration of this contribution is the role TK plays in identifying, anticipating, and mitigating the harmful effects of climate change on biodiversity.

In summary, the environmental dimension materializes through ecosystem conservation methods that often incorporate traditional ecological knowledge. Social sustainability is fostered by empowering communities through participatory governance models, which often draw upon indigenous systems of social and political organization. Economic sustainability emerges from responsible commercialization approaches that align with both modern regulatory standards and traditional resource management practices. This tripartite structure reveals how sustainable development operates not simply as an abstract legal concept, but as a dynamic system that recognizes TK systems as equally valid sources of normative authority within IL.

3 . Principle of Sustainable Development in International Law

Certain scholars, drawing on the Statute of the ICJ, distinguish between the principles that arise specifically from international law from those referred to in Article 38(c) (Herczegh, 1969); (Bassiouni , 1990)[23]. The criteria to find these general principles might be “certain provisions of statutory law of a general character or as a form of unwritten rules akin to natural law standing above positive law (…)” (Herczegh, 1969)[24]. Nevertheless, other scholars maintain that principles should be defined in their legal structure and when they start being applicable (Borowski, 2003)[25]. According to Borowski (2003), the concept of “principle” is based on constitutional or international rules. The structure, however, seems to be the same.

The function of these “general principles,” whether understood as general rules or as unwritten norms, is not entirely clear. On the one hand, some scholars argue that principles primarily serve an interpretative role, guiding the application of rules that are already in force (Herczegh, 1969). On the other hand, it has been argued that “principles” serve to fill gaps in the legal system when no applicable legal rules exist, thereby supporting contemporary legal reasoning in international law. In this sense, their function aligns—at least in part—with the classical understanding of the sources of international law[26].

Rights and obligations should be articulated with sufficient clarity and defined in relation to the overarching goals of sustainable development (Jaye, 2009). As Fuentes points out, international environmental law has often evolved through unequal competition between the imperatives of economic development and the demands of environmental protection, a tension that underlies the normative construction of the principle of sustainable development (Fuentes, 2002)

This section will therefore examine the relevant approaches to legal rules—specifically, the characterization of principles as international legal rules—and will clarify their main elements as outlined above[27].

The first solution to this problem is a new approach related to future generations but involving ancient knowledge and preparing new sources for protection against ECC. CBD[28] and the Framework Convention on Climate Change (FCCC) have each contributed important concepts, as well as established rights and obligations to the development of SD. I argue that these concepts encompass a principle, e.g.: "common concern of mankind", "common but differentiated responsibility" (Bodansky, 2010), "fair and equitable sharing of benefits from utilization of genetic resources", "sovereign rights on natural resources", "protection of the climate system for the benefit of present and future generations of humankind", "equity", "precautionary measures" and "sustainable development"[29]. In this line of reasoning, the analysis will focus on SD as a General Principle of Law, as identified by Judge Weeramantry—one that emerges not only from international instruments but also from the practices of individuals, communities, nations, and States[30].

4. "El Niño" Phenomenon and PSD

The El Niño phenomenon has long served as a source of knowledge about extreme climatic variability affecting specific regions and countries, particularly Peru and Ecuador. Today, it is recognized as a global environmental phenomenon. Its earliest documented description dates back to 1892 and is grounded in the Traditional Knowledge of local communities: fishermen from Paita, Peru, observed a marked rise in ocean temperatures that disrupted the expected seasonal cycle, producing dry conditions during what should have been the rainy season (Carrillo, 1892). Such phenomena materialize in ways that significantly alter the lives of nations (Quinn et al, 1987). Local communities in Paita adopted what would now be understood as Sustainable Development measures to confront these events, such as storing grains and water. Today, the specific observations recorded by this local community help explain the extreme climatic variations associated with the El Niño phenomenon[31].

At the same time, research has highlighted the important contributions of Indigenous Communities (IC) and local communities (LC) in addressing both the causes and the effects of climate change, as well as in advancing mitigation efforts. As noted in the literature, such communities can "deepen our understanding of climate change by combining scientific evidence with local and indigenous knowledge (…) and develop adaptation and mitigation strategies" (European Networking Group for Integrating Martin Policy, 2014). However, a conceptual clarification is necessary. While IC and LC may, in certain contexts, form part of minority groups, this does not diminish the normative relevance or epistemic value of their knowledge systems[32].

Therefore, TK might help to define climate change and the ECC as well as different procedures to mitigate the effects of climate change.

5. Different Judgements in which Sustainable Development has been included

a. The Gabčikovo-Nagymaros Case

The concept of Sustainable Development has been described in the famous GN case as:

> Owing to new scientific insights and to a growing awareness of the risks for mankind—for present and future generations—of pursuit of such interventions at an unconsidered and unabated pace, new norms and standards have been developed, set forth in a great number of instruments during the last two decades. Such new norms have to be taken into consideration, and such new standards given proper weight, not only when States contemplate new activities but also when continuing with activities begun in the past. This need to reconcile economic development with environmental protection is aptly expressed in the concept of sustainable development33.

This has raised the question of whether SD, either as a concept or as a principle, is capable of "effectively" solving problems. From this perspective, both the concept and the principle might appear to lack practical utility. Such criticism, however, stems from a fundamental misunderstanding. Law is an ideal construct that manifests through real or conceptual expressions; more precisely, law is a conceptual product of society rather than a strictly practical instrument, and its operation necessarily relies on ideas and concepts. It is therefore misguided to demand from law functions for which it was never designed. Another important point is that despite positivist expectations regarding the formal enactment of international legal rules on SD, the principle has evolved from grassroots regulatory initiatives developed outside the traditional legal system—even though these initiatives have subsequently been acknowledged and protected by that very system[34].

The *Gabčíkovo–Nagymaros* case introduces a new standard relevant to the further development of the idea of sustainable development: "the risks for mankind—for present and future generations." When this standard is taken into account, the concept of sustainable development demonstrates its effectiveness, as it provides a criterion that is actually applied by those negotiating treaties and by actors interpreting or implementing custom or principles of law.

The ICJ judgment clarified that both current and future generations are seriously endangered when mankind ignores the environmental impacts of mechanization, and technical and industrial development . This is in line with the principle of intergenerational equity, which highlights the need to preserve natural resources for the benefit of future generations (Sands et al, 2018)[35].

This case also upholds one of the elements of the principle of sustainable development: the *equitable use of natural resources* or *intragenerational equity* (Sands et al, 2018), which implies that the use by one State must consider the needs of other States. Indeed, the ICJ's ruling in the Gabčíkovo–Nagymaros case found that Czechoslovakia violated international law by unilaterally assuming control of a shared resource and depriving Hungary of its right to an equitable and reasonable share of the Danube's natural resources (Szabó, 2017).

Based on the GN case, legal doctrine has developed a subprinciple related to sustainable development: the principle of sustainable use, according to which natural resources must be exploited in a "sustainable", "prudent" or "rational" manner (Sands et al, 2018).

i . Separate opinion of Judge Weeramantry

The Separate Opinion refers to the concept of SD as articulated in the judgment. However, Judge Weeramantry explains that he regards SD "to be more than a mere concept, and rather a principle with normative value which is crucial to the determination of this case"[36]. And he further affirms: "Without the benefits of its insights, the issues involved in this case would have been difficult to resolve"[37]. According to Weeramantry, the principle of SD has several defining characteristics. The first is the need for economic development (or other legitimate objectives). The second is the existence of some form of interference with that objective. The third is the presence of an environmental impact—as was

the case in *Gabčikovo–Nagymaros*.[38] Pursuant to Weeramantry's opinion, both the right to environmental protection and the right to development form part of international law, although these rights may collide and it is for the principle of sustainable development to resolve the conflict[39]. However, the concept of sustainable development as a normative principle was not considered by the majority of the Court (Canelas de Castro , 1998).

b. The Contribution of the Pulp Mills Case

The Court refers to "sustainable development" in the context of assessing the relationship between the procedural obligations and the substantive obligations (Tladi, 2017). In its judgment, the ICJ emphasized the "interconnectedness between equitable and reasonable utilization of a shared resource and the balance between economic development and environmental protection that is the essence of sustainable development"[40]. This is the essence of SD. Sustainable development, as the Court noted, involves safeguarding the conservation of the river environment while respecting the right of the Riparian States to pursue economic development[41]. In this context, the ICJ again referred to the Gabcikovo-Nagymaros case, noting that the need to reconcile "economic development with protection of the environment is aptly expressed in the concept of sustainable development"[42].

The Court stressed that cooperation between States is essential for addressing environmental risks. As Tladi (2017) said: "For the Court, therefore, cooperation, which is the essence of the procedural obligation laid out in Articles 7 to 12, is key for the sustainable management of the River Uruguay" (p. 246). It observed that States "can jointly prevent and manage risks of damage to the environment (...) though the performance of both the procedural and the substantive obligations"[43].

Sustainable development implies a "balance between the use of the"[44] natural resource (water) and "the protection of"[45] the "recipient" of the natural resource (river) consistent with the reconciliation of economic development with the protection of the environment. Once again, the principle of the sustainable use of natural resources is emphasized.

At the same time, "the Court wishes to add that such utilization could not be considered equitable and reasonable if the interests of the other (…) State in the shared resource"[46] and, by extension, the interests of persons or of nature dependent on that resource, "and the environmental protection of the latter were not taken into account"[47]. Thus, the element of equitable use of natural resources is again brought to the forefront. In this sense, the right to equitable use is situated within the broader framework of sustainable development (Szabó, 2017). However, these references are never included in the Court's assessment of the law and facts and, consequently, we are deprived of a glimpse into the Court's attitude towards sustainable development (Tladi, 2017).

The ICJ also highlighted the importance of vigilance and prevention: "vigilance and prevention are required on account of the often-irreversible character of damage to the environment and of the limitations inherent in the very mechanism of reparation of this type of damage"[48]. By mentioning the terms "vigilance" and "prevention," the ICJ referred to the concepts of precaution and prevention (Szabó, 2017). This reasoning is grounded in the fundamental principle of international law that States must exercise their right to use their own territory in a manner that does not cause harm to the environment of other States or to areas beyond national jurisdiction[49]. The ICJ stressed that States must take preventive measures to avoid damage to the environment, recognizing that environmental protection extends beyond national jurisdiction, therefore, there must be environmental protection within and beyond the country's jurisdiction (jurisdiction as the limit of national legal rules):

> The existence of the general obligation of States to ensure that activities within their jurisdiction and control respect the environment of other States or of areas beyond national control is now part of the corpus of international law relating to the environment50.

In that sense: "effects of a human construction on the environment should be considered"[51].

In the Court's view, sustainable development may operate as a standard, a rule, or a principle. What is clear is that the ICJ is engaging in the interpretation and application of international law when invoking it[52]. (Tladi, 2017) says that in this case "the Court is unwilling to affirm sustainable development as a legal norm. The Court rather refers to sustainable development as an 'objective'" (p. 252). For the Court, SD is a "concept", establishing the idea of "balance" between various essential elements: "economic development and environmental protection"[53]. What is remarkable is that the ICJ recognizes a general obligation to prevent and to assume responsibility for causing harm to another State through activities conducted lawfully within one's own territory, and it regards this obligation as forming part of the corpus of international law.

c. The Contribution of "Dispute regarding Navigational and Related Rights" Judgement

The judgment rendered by the ICJ in *Dispute regarding Navigational and Related Rights* plays a significant role in reinforcing the legal construction of the PSD. Although the case was primarily about territorial sovereignty, environmental damage, and treaty interpretation, the Court's reasoning provides meaningful insights into how sustainable development operates as a principle of IL.

The judgment is particularly relevant in three dimensions: (1) the protection of essential human needs in the context of shared natural resources; (2) the role and limits of national regulation in such contexts; and (3) the evolving recognition of environmental protection as a legitimate public interest capable of justifying regulatory measures.

i . Sustainable Development and Essential Human Needs

A central aspect of the Court's reasoning concerned the right of Costa Rican inhabitants to navigate the San Juan River for purposes necessary to meet their essential needs. While the 1858 Treaty did not explicitly grant this right, the Court inferred it from the treaty as a whole

> The Court is of the opinion that it cannot have been the intention of the authors of the 1858 Treaty to deprive the inhabitants of the Costa Rican bank of the river (...) of the right to use the river to the extent necessary to meet their essential requirements (...) the parties must be presumed (...), to have intended to preserve for the Costa Ricans living on that bank a minimal right of navigation for the purposes of continuing to live a normal life in the villages along the river54.

The Court continues stating

> Nonetheless, the Court is of the opinion that the reasons given above with regard to private vessels which navigate the river in order to meet the essential requirements of the population (...) are also valid for certain Costa Rican official vessels which (...) are used solely for the purpose of providing that population with what it needs in order to meet the necessities of daily life (...). Consequently, this particular aspect of navigation by 'official vessels' is covered by the right of navigation defined in paragraph 79 above: this right (...) is inferred from the provisions of

> the Treaty as a whole (...)55.

In this regard, the ICJ ruling reiterates what was stated in GN: the principle of sustainable use. In addition, the other element of the PSD is the equitable use or intragenerational principle.

ii. Regulatory Power and Its Limits in Shared Resources

The Court also clarified the scope and permissible content of national regulation over a shared natural resource. In this context, a legitimate regulatory measure must meet several conditions:

(…) A regulation in the present case is to have the following characteristics

1. it must only subject the activity to certain rules without rendering impossible or substantially impeding the exercise of the right of free navigation;
2. it must be consistent with the terms of the Treaty, such as the prohibition on the unilateral imposition of certain taxes in Article VI;
3. it must have a legitimate purpose, such as safety of navigation, crime prevention and public safety and border control;
4. it must not be discriminatory and in matters such as timetabling must apply to Nicaraguan vessels if it applies to Costa Rican ones;
5. it must not be unreasonable, which means that its negative impact on the exercise of the right in question must not be manifestly excessive when measured against the protection afforded to the purpose invoked56.

This nuanced understanding of regulation underscores the balance inherent in sustainable development. The principle does not deny the sovereign right to regulate, but it demands that such regulation be reasonable, proportional, and non-discriminatory, particularly when it affects basic human needs and international commitments.

iii. Environmental Protection as a Legitimate Purpose

A landmark statement in this judgment is the recognition that environmental protection, even if not originally envisaged in a 19th-century treaty, has emerged as a legitimate interest justifying modern regulatory actions:

> The Court considers that, over the course of the century and a half since the 1858 Treaty was concluded, the interests which are to be protected through regulation in the public interest may well have changed in ways that could never have been anticipated by the Parties at the time: protecting the environment is a notable example (...) Nicaragua, in adopting certain measures which have been challenged, in the Court's opinion, is pursuing the legitimate purpose of protecting the environment57.

This passage is a clear endorsement of the idea that principles, such as sustainable development, evolve over time, adapting to contemporary global challenges. Environmental protection, once peripheral, has now become central to interpreting treaties and balancing competing rights and interests

> So far as the lawfulness of the requirement is concerned, the Court is of the opinion that Nicaragua, as sovereign, has the right to know the identity of those entering its territory and also to know that they have left. The power to require the production of a passport or identity document of some kind is a legitimate part of the exercise of such power. Nicaragua also has related responsibilities in respect of law enforcement and environmental protection58.

Certainly, the Court is solving a case here. Nevertheless, the statements and reasoning of the judgement provide elements to define PSD. This case reinforced the idea that shared resources should be used considering the needs of human beings inhabiting the place where these resources are essential to sustaining their livelihoods. Furthermore, national regulations must take certain factors into account, and legal rules should respect the exercise of fundamental freedoms necessary to meet basic human needs—in this case, navigation. Second, any limitations imposed must not contravene a superior norm, such as a treaty. Only a legitimate purpose can justify restrictions on freedom imposed by national law, and such restrictions must apply without discrimination. The requirement of reasonableness is essential: the purpose invoked must adequately account for the limitations placed on the relevant right. These considerations align with core features of the PSD: the need to ensure that human beings have access to essential resources; the requirement that legal rules prohibit unjustified restrictions on fundamental freedoms; and the expectation that the use of shared or vital resources must be governed by standards of reasonableness.

d. Contribution of "Construction of a Road in Costa Rica along the San Juan River"

The *Construction of a Road* significantly contributes to the consolidation of the PSD as part of International Law. The Court's reasoning reflected a deeper engagement with environmental principles embedded in customary international law, particularly the principle of prevention, the duty of due diligence, and the obligation to carry out Environmental Impact Assessments (EIAs). These principles not only shape the procedural obligations of States but also form the substantive core of what is increasingly recognized as a legal principle of sustainable development. The ICJ explicitly cited its earlier ruling in *Pulp Mills* and reaffirmed its reliance on the principle of prevention[59].

This line of reasoning reinforces the notion that preventing significant transboundary environmental damage is a core component of the PSD. As such, it should apply to any activity capable of producing significant environmental harm, regardless of whether its origin is industrial, infrastructural or otherwise[60].

In this sense, the EIA becomes a legal and practical mechanism by which States can discharge their obligation of prevention. The Court stated: "Although the Court's statement in the Pulp Mills case refers to industrial activities, the underlying principle applies generally to proposed activities which may have a significant adverse impact in a transboundary context"[61].

Moreover, this reasoning aligns with the broader logic of the Court in other cases[62]. The cumulative jurisprudence suggests that the PSD includes both precautionary and preventive dimensions, which apply in advance of harm and regardless of whether the activity in question is expressly regulated by a treaty.

The Court also expressed:

> Nicaragua requests the Court to order Costa Rica to restore to the extent possible the situation that existed before the road was constructed, and to provide compensation for the damage caused insofar as it is not made good by restitution (...) The Court recalls that restitution and compensation are forms of reparation for material injury (...) restoring the original condition of the area where the road is located would not constitute an appropriate remedy for Costa Rica's breach of its obligation to carry out an environmental impact assessment63.

The Court illustrated that principles are not merely interpretive devices within judicial reasoning but can in fact emerge from custom and evolve into binding norms of IL. The principle of prevention, in this context, is anchored in the broader duty of due diligence, which obliges States to control activities within their jurisdiction or under their control to prevent transboundary environmental harm. Within the framework of the PSD, this obligation assumes particular relevance: the prevention of significant harm to the environment of other States becomes not only a procedural requirement, but also a substantive element of the duty to balance development and environmental protection.

Within this line of reasoning, the prohibition to "significant damage to the environment of another State" constitutes another element of the principle of sustainable development. The obligation applies to any activity capable of causing significant transboundary harm and is further supported by the Court's reasoning in *Legality of the Threat or Use of Nuclear Weapons*, which emphasizes the need for preventive legal standards when confronted with potentially irreversible environmental consequences.

Moreover, restitution and compensation constitute additional features of this principle when environmental harm originating within one State's territory materializes either in another State's territory or directly affects areas beyond national jurisdiction. However, in the Court's view, such remedies do not arise merely from the existence of rights claimed by another State.

e. Whaling in the Antarctic (Australia v. Japan)

The dispute concerns the legality of Japan's large-scale whaling program conducted in the Antarctic Ocean under the name *Japanese Whale Research Program under Special Permit, Phase II* (JARPA II). Australia argued that Japan was breaching its international obligations under the *International Convention for the Regulation of Whaling* (ICRW).

The central issue in the case revolved around the interpretation and application of Article VIII, paragraph 1, of the ICRW. This provision allows a State to grant a "special permit" to kill, take, and treat whales "for purposes of scientific research" exempting such activities from the application of the other provisions of the Convention.

Japan contended that its activities under JARPA II were lawful because the permits were issued for scientific research purposes. Australia argued that JARPA II did not constitute a program undertaken for purposes of scientific research and that, accordingly, Japan was in breach of the Schedule to the Convention, which establishes moratoria and zero-catch limits for commercial whaling.

The judgement represented an advance in the operationalization of sustainable development. In this context, the Court's reference to sustainability concerned the whaling industry[64], particularly exploitation of different types of whales[65].

In analyzing the Convention, the Court recognized two purposes: i) conservation, as it acknowledges the interest of nations in safeguarding the major natural resources represented by whale populations for future generations. In this sense, it seeks to protect all species from overfishing and to provide a period for the recovery of certain depleted species; and ii) sustainable utilization, since the objective is to also enable the orderly development of the whaling industry[66].

In that sense, the Court said: "Australia and Japan have respectively emphasized conservation and

sustainable exploitation as the object and purposes of the Convention in the light of which the provisions should be interpreted"[67].

Accordingly, such exploitation must not deplete the resource; rather, whale stocks must be conserved and utilized in a sustainable manner[68]. The Court holds that evaluating a scientific investigation requires an objective test to analyze the individual intentions of government officials. However, it questions whether the general objectives of the investigation are, by themselves, sufficient to justify the program as it was designed and implemented[69].

f. Advisory Opinion on Obligation of States in respect of Climate Change

The PSD is mentioned and applied in the 2025 Advisory Opinion concerning the obligations of States regarding Climate Change. In paragraph 147, and following the GN case, the ICJ states that "the principle of sustainable development concerns the "need to reconcile economic development with protection of the environment"[70]. The Court acknowledges that environmental treaties —specifically naming the UNFCCC, the Kyoto Protocol, and the Paris Agreement—establish sustainable development as a principle according to which "the Parties shall be guided"[71]. It further indicates that the principle "has developed independently of treaties"[72], referring to the Rio Declaration and the Sustainable Development Goals, which have contributed to shaping this principle. The Court notes that

> Given its continuous and uncontested universal recognition, the Court considers that the principle of sustainable development guides the interpretation of certain treaties and the determination of rules of customary international law, including the duty to prevent significant harm to the environment and the duty to co-operate for the protection of the environment73.

In conclusion, there is not only continuity between the earliest and the most recent formulations of the PSD, but several of its key elements—namely, economic development and environmental protection—are now clearly defined. The principle operates as a guide for interpreting treaty provisions, informs the identification and development of customary international law, and functions as a method for interpreting it.

As a critique, it can be noted that the ICJ approached the concept of sustainable development primarily as an exercise in balancing economic and environmental interests. Such a narrow interpretation overlooks the essential social dimension of sustainable development, thereby reducing it to a mere mechanism for reconciling economic growth with environmental protection (Tladi, 2017), (Szabó, 2017); see also the section above concerning Judge Álvarez's separate opinion).

6 . Approaches: Rejection or Recognition—That Is the Question

The theoretical foundation for analyzing sustainable development principles draws substantially from the works of legal positivists, such as Hans Kelsen, H.L.A. Hart, and Joseph Raz (already mentioned before). As evidenced in Crawford's authoritative treatises on international law (2012; 2013), these perspectives have been systematically incorporated into contemporary legal discourse. Their frameworks raise fundamental questions about the nature of legal principles: if we classify sustainable development as a principle, does it constitute a binding rule (*lexlata*) or an aspirational standard (*lex ferenda*)?

While the international community has reached consensus on the necessity of rights and obligations within the sustainable development paradigm—evident in successive UN declarations (from the Brundtland Report to the 2030 Agenda), the jurisprudence of international courts, and widespread doctrinal acceptance— critical ambiguities persist regarding, first, its precise normative structure, and second, the specific character of associated rights and duties (whether they entail hard-law obligations or soft-law commitments). This unresolved status creates the central tension between rejection (as non-binding principle) and recognition (as emerging legal norm) in contemporary jurisprudence.

7 . A Continuous Idea on SD

It is possible to identify a common and continuous understanding of sustainable development within the jurisprudence of the ICJ. Although new elements have been incorporated over time, the underlying idea remains consistent with that first articulated in the *Fisheries* and *Gabčíkovo–Nagymaros* cases: the protection of the natural means necessary for human survival—including, importantly, knowledge related to those means. Therefore, protection of certain traditional knowledge related to the survival of natural resources (Genetic Resources by exemption) is a main element to be protected even by Article 8(j) of the CBD and the Nagoya Protocol (NP)[74]; otherwise, they will disappear. Therefore, this kind of TK associated with genetic resources (GRs) (conservation, survival of human beings) should be preserved.

8. What is the Principle of Sustainable Development?

Is sustainable development a principle? The status of sustainable development as a principle finds support in its recurrent application across ICJ jurisprudence, where core elements like EIAs and the precautionary approach have been consistently recognized. These components collectively serve two fundamental objectives: first, safeguarding human well-being by ensuring access to essential means of survival; and second, regulating the use of natural resources at sustainable levels that preserve ecological balance for current and future generations of all species. This dual normative function positions sustainable development, not merely as a policy concept, but as a foundational principle that permeates international law and related interdisciplinary frameworks. In a similar sense, Viñuales (2021) says: “it is sufficient to observe that sustainable development is not merely a concept (...), but a normative concept” (p. 289).

9 . How Is It Considered a “Principle”?

A “principle” in IL might be related to sources of the discipline and legal rules on the subject. In this case, such logical elements are the following:

1. Documentation by treaties and customs as well as other documents related to natural sciences.
2. Documentation of Natural Resources for the survival of human beings75.
3. Background of many ICJs judgments as well as treaties (pointed out in this article already).

Principles possess identifiable features. First, they entail a duty — in this context, a duty to protect or conserve animals, plants, microorganisms, and their genetic resources (GRs). This duty is expressed in several international agreements, most notably the CBD and the NP, and it applies to States as well as to individuals, local communities, and Indigenous peoples. Second, when principles come into conflict — for example, the PSD, as it relates to the conservation of biodiversity against the effects of climate change, and the Principle of Private Property — they must be *weighed* against one another. Third, principles operate according to the logic of *optimization*: they must be realized to the greatest extent possible within factual and legal constraints. For instance, the conservation of genetic resources through their relocation to safer areas constitutes a factual means of optimizing the principle. Finally, the principle of proportionality must also be satisfied. The relocation of GRs, whether within or beyond national borders for conservation purposes, may fulfill this requirement.

The sub-elements are “suitability”, “necessity”, and “proportionality". Suitability requires that the measure adopted advance a legitimate aim, such as protecting TK or conserving GRs from effects of climate change, which are valid objectives in safeguarding human life.

Necessity requires that no alternative, less restrictive measure be available to achieve the legitimate aim. In this context, TK regarding the effects of climate change is indispensable — not merely for documenting these phenomena, but for establishing the methodologies through which they can be identified and defined with precision. Even today, in technologically advanced societies, scientific knowledge does not encompass every aspect of nature. Proportionality *stricto sensu* may further require weighing the competing interests at stake, leading to the conclusion that protecting TK on climate-related phenomena or ensuring the survival of GRs — both of which are fundamental to the survival of humanity — may outweigh proprietary claims over TK held by particular groups or sovereign claims over GRs held by certain States.

The Principle of Sustainable Development may operate in two ways: by protecting TK related to ECC impacts on biodiversity, and by supporting the conservation of GRs through their relocation to safe areas. Weeramantry has characterized SD both as a principle and as law (Weeramantry, 2004). This is justified by its development through ICJ jurisprudence and scholarly doctrine (Barral, 2012). SD also complements treaties where gaps arise, offering additional normative guidance. As Weeramantry notes, “Many regions of the world are rich in a particular resource—the resource of traditional wisdom” (Weeramantry, 2004).

On the other hand, scholars have examined the concept of SD and the principles derived from it. The ICJ, however, has articulated the concept and its elements through various judgments, consistently treating SD itself in the form of a principle. The current existence of many principles (Cordonier Segger y Khalfan , 2004), is not enough to define SD. In certain international documents, most notably Principle 4 of the Rio Declaration, SD is considered a concept, an “objective” to be achieved and not necessarily a principle. However, ICJ has employed the concept as a principle. It remains unclear whether SD encompasses a set of principles under its broader “idea” or “concept,” or whether SD itself constitutes a principle. For the ICJ, SD is a concept with multiple expressions, which may explain the Court’s approach in treating it flexibly across different cases (McDougall, 1953). If numerous principles are subsumed within the broader concept of SD, resolving an international dispute becomes challenging when it is unclear which specific principle should apply. In such cases, invoking a principle that accommodates multiple expressions is useful, as it facilitates the aim set out in the Declaration: Sustainable Development.

10. A proposal for a Definition of SD

The structure of the Sustainable Development principle can be derived from various legal rules, including Article 8(j) of the CBD, the principle of common but differentiated responsibilities under the UNFCCC, and relevant ICJ judgments. SD entails not only preservation but also prevention, building on accumulated knowledge of environmental phenomena—illustrated, for example, by the case of *El Niño*. Its structure rests on the idea of an integrated principle that incorporates social dimensions, particularly those involving local and Indigenous communities.

In this line of reasoning, it is possible to propose a definition of the PSD grounded in GN while incorporating elements of the principle informed by the theory of interests: "the interests which are to be protected through regulation in the public interest may well have changed in ways that could never have been anticipated by the Parties at the time: protecting the environment is a notable example."[76]

Likewise, additional elements of this principle can be drawn from various judgments closely connected to sustainable development. One such element concerns the types of norms and standards that must be considered: "new norms and standards have been developed (...) not only when States contemplate new activities but also when continuing with activities begun in the past."[77]

The other element concerns vigilance and prevention, which requires States to refrain from actions that may cause environmental harm[78]. Human beings remain at the center of legal protection under this principle, as demonstrated by the Court's acknowledgement of Costa Rican inhabitants' rights to navigate the San Juan River for purposes necessary to meet their essential needs.[79]

National legal rules should neither render the exercise of the right impossible nor substantially hinder it, and their interpretation should reflect the evolving nature of the law

> only subject the activity to certain rules without rendering impossible or substantially impeding the exercise of the right (…) consistent with the terms of the Treaty (…) have a legitimate purpose (…) not be discriminatory and in matters (…) not be unreasonable (…).80

An evolutionary interpretation should also be considered: "…may well have changed in ways that could never have been anticipated by the Parties at the time: protecting the environment is a notable example."[81]

On the other hand, the PSD must consider the responsibility of every State in relation to IL, States shall comply with their international legal obligations[82].

Even the principle includes the right of inspection to objects affecting the environment. The Court has considered this in *Dispute regarding Navigational and Related Rights*.[83]

The Principle of Prevention forms part of the PSD insofar as it requires avoiding harm to others[84].

In the same line of reasoning, the Court held that Environmental Impact Assessments (EIAs) are required whenever a proposed industrial activity poses a risk of significant adverse effects in a *transboundary context*, particularly when a shared resource is involved[85]. The Court is following previous decisions in which EIAs have been included as part of the concept of SD[86]. Furthermore, this assessment must be conducted *ex ante* and tailored to the circumstances of each case. Where transboundary harm is at stake, the duty of due diligence requires prior notification and consultation regarding the potential effects, with a view to preventing or mitigating the associated risks.

Therefore, the elements of the PSD have been articulated by the ICJ in a series of landmark judgments, and it may now be time to formally acknowledge both these features and the principle itself[87].

In other words, the ICJ reinforces the view that shared resources must be used with due regard to the needs of the human communities that depend on them as these resources are essential for meeting their basic needs. Furthermore, national regulations should take certain features into account. First, the requirements they impose must respect the exercise of freedoms linked to people's basic needs. Second, any limitation must not conflict with a higher norm, such as a treaty. Restrictions imposed by national law are permissible only when pursuing a legitimate purpose and when applied without discrimination and in a reasonable manner. In this regard, the requirement of reasonableness is essential, as the stated purpose must adequately justify the restriction of the right.

The main elements of the principle of sustainable development operate on the idea of achieving a "balance" among various essential components. In the Court's view, these include, above all, "economic development and environmental protection". Consequently, cooperation between States is key to developing the concept legally and to comply with it by preventing and managing risk. In the case of natural resources, both the sources and the recipients must be protected, considering the interests of the State that holds sovereignty over the resource as well as those of other States with legitimate interests in it. Equity and reasonableness, economic development and environmental protection, vigilance and prevention—all of these constitute essential components of Sustainable Development. It is particularly noteworthy that the Court recognizes a general obligation to prevent and to assume responsibility for harm caused to another State by activities carried out lawfully within one's own territory, treating this obligation as part of the corpus of international law. Such an obligation first emerged in Trial Smelter and has been included, for example, in the CBD.

11. Conclusions

SD is a principle of international law and may provide a basis for conserving biodiversity in the face of ECC, while simultaneously drawing on traditional knowledge to achieve this goal. As noted above, the PSD is grounded in the concept of SD, and its process of "construction" incorporates traditional knowledge. Traditional knowledge brings new insights into the prevention of negative consequences produced by human acts (dam, climate change, road or prohibition of food consumption to human beings, etc.). These human activities may generate negative effects on the environment or on other individuals; accordingly, the PSD shifts legal reasoning from a model of absolute permission to one in which permission is granted only after a prior evaluation of the activity. All of them have been considered in international judgements and by the doctrine. It is possible to trace an evolution from Judge Álvarez's views to those of Judge Weeramantry—shifting from a predominantly social and economic perspective to one that integrates economic and environmental considerations. Several of the international conferences cited by Judge Weeramantry in his Separate Opinion contributed to this shift and helped support and further characterize the Principle of Sustainable Development.

The structure of the principle is shaped by various rules. It requires not only a focus on preservation but also on prevention, drawing on accumulated knowledge of environmental phenomena, as illustrated by the case of *El Niño*. Its structure rests on the establishment of a principle integrating social, environmental, and economic dimensions.

Considering SD as a principle appears to be a logical outcome of the current legal evolution of the concept. This principle encompasses a range of elements—both those traditionally associated with the

concept and those incorporated through the jurisprudence already discussed. What is particularly noteworthy, however, is the function this principle performs in international law. As a source of international law, it enables the resolution of disputes and informs the interpretation of international legal rules.

A proposed definition of the PSD is that it "*needs to reconcile economic development with protection of the environment*"[88] by preventing, assessing, and reducing the effects of human activities on the environment, while granting rights and imposing obligations on international actors to achieve these objectives.

Contribución de los autores

	Colaboración académica													
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Sergio Peña Neira	X	N/A	X	X	X	X	X	X	X	X	N/A	X	X	X
Patricio Araya Meza		N/A	X	X	X	X	X	X	X	X	N/A		X	X
Sebastián Henríquez San Martín		N/A	X	X	X	X	X	X	X	X	N/A		X	X

1- Administración del proyecto, 2- Adquisición de fondos, 3- Análisis formal, 4- Conceptualización, 5- Curaduría de datos, 6- Escritura – borrador original, 7- Escritura – revisión y edición, 8- Investigación, 9- Metodología, 10- Recursos, 11- Software, 12- Supervisión, 13- Validación, 14- Visualización

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12 Convention on Biological Diversity, adopted 5 June 1992, entry into force 29 December 1993, United Nations Treaty Series 1760, p. 79.

13 Case concerning the Gabcikovo-Nagymaros Project (Hungary v. Slovakia), Judgment. (September 25, 1997). Para. 54.

14 “[J]uridical rehabilitation of aboriginal peoples” has been a common theme in international law since the 1950s onwards. Even articles in the International Covenants of Economic, Social and Economic Rights and International Covenant on Political and Civil Rights have been included as reasons for legally protecting aboriginal peoples. “Aboriginal nations” have been considered “peoples” (McHugh, 2005). However, indigenous and local communities have not been included in this line of reasoning and here is one work on the subject. Certainly, the rights of indigenous people should be recognized, but indigenous peoples have focused on land rights through a proposal of a charter of rights related to aboriginal peoples explained as “traditional rights” and “indigenous rights” (Crawford, 1989).

15 Convention on Biological Diversity, Article 8(j), Paris Agreement, adopted 12 December 2015, entry into force 4 November 2016, United Nations Treaty Series 3156, p. 79, article 7.5. Agreement on Marine Biological Diversity of Areas Beyond National Jurisdiction (BBNJ Agreement), adopted 19 June 2023, entry into force 17 January 2026, United Nations Treaty Series CN.447.2025 and Chair's Draft text proposal on International legally binding instrument on plastic pollution, including in the marine environment, 15 August 2025, available in https://resolutions.unep.org/incres/uploads/chairs_draft_text_proposal_13_august_2025_14.48.docx. Even Weeramantry has explained a case in Sri Lanka in Case concerning the Gabcikovo-Nagymaros Project (Hungary v. Slovakia). Separate Opinion of Vice-President Weeramantry. (September 25, 1997). Pages 98-104.

16 To analyze the mentioned point of view, see: Crawford (2012); (Crawford, 2013).

17 International Status of South West Africa. Dissenting opinion of Judge Alvarez (July 11, 1950), para. 173-176.

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21 Case concerning the Gabcikovo-Nagymaros Project (Hungary v. Slovakia). Separate Opinion of Vice-President Weeramantry. (September 25, 1997), pp 103-104.

22 Convention on Biological Diversity, Articles 1, 8(j) and 15.

23 For the purposes of this article, it is assumed that the expression "civilized nations" in Article 38(c) binds all nations or, as pointed out by Herczegh, refers to all nations forming a State (Herczegh, 1969).

24 According to the author, principles operate as a subsidiary source of law when other sources are not fully developed; in other words, conventions or customary rules that have not yet reached full maturity may give rise to general principles.

25 "A principle, or a fundamental principle is in essence a rule of general content governing the life of an individual or society" (Herczegh, 1969).

26 Case Pulp Mills on the River Uruguay (Argentina v. Uruguay). Separate opinion of Judge Cançado Trindade. (April 20, 2010), para. 5. As expressed by Judge Cancado Trindade: "whether the reference to "general principles of law" found in Article 38 (1) (c) of the ICJ Statute refers only to those principles found in foro domestico or encompasses likewise those principles identified also at international law; and (b) whether these latter are only those of general international law or whether they comprise also those principles which are proper to a domain of international law". Case Pulp Mills on the River Uruguay (Argentina v. Uruguay). Separate opinion of Judge Cançado Trindade. (April 20, 2010). Para. 6.

27 Case Pulp Mills on the River Uruguay (Argentina v. Uruguay). Separate opinion of Judge Cançado Trindade. (April 20, 2010). Para. 7: "(…) the imperatives of human health and well-being of peoples, the role of civil society in environmental protection; obligations of an objective character, beyond reciprocity; and the legal personality of the Administrative Commission of the River Uruguay (CARU)".

28 Convention on Biological Diversity.

29 Convention on Biological Diversity, articles 1,8(j) and 15, Framework Convention on Climate Change, adopted 9 May 1992, entry into force 21 March 1994, United Nations Treaty Series 1771, p. 107, Article 3.1. Even the Kyoto Protocol to the United Nations Framework Convention on Climate Change, adopted 11 December 1997, entry into force 16 February 2005, United Nations Treaty Series 2303, p. 162, Article 2; Paris Agreement, Article 2.

30 Case concerning the Gabcikovo-Nagymaros project (Hungary v. Slovakia). Separate Opinion of Vice-President Weeramantry. (September 25, 1997).

31 Another example is the International Organization for Migration and National Disaster Centre (2015).

32 This problem has been brought to my attention by Antje Wiener during my presentation at the Lauterpacht Center Research Center of International in 2018. For example, (United Nations Educational, Scientific and Cultural Organization, 2013).

33 Case concerning the Gabcikovo-Nagymaros project (Hungary v. Slovakia). Judgment. (September 25, 1997), para. 140.

34 Case Pulp Mills on the River Uruguay (Argentina v. Uruguay). Provisional Measures. (July 13, 2006),

para. 14.

35 We can observe that the original idea has changed to a concept in which human beings in the present and in the future are central.

36 Case concerning the Gabcikovo-Nagymaros Project (Hungary v. Slovakia). Separate Opinion of Vice-President Weeramantry. (September 25, 1997), p. 88.

37 Case concerning the Gabcikovo-Nagymaros Project (Hungary v. Slovakia). Separate Opinion of Vice-President Weeramantry. (September 25, 1997), p. 88.

38 Case concerning the Gabcikovo-Nagymaros Project (Hungary v. Slovakia). Separate Opinion of Vice-President Weeramantry. (September 25, 1997), pp. 89 and 98.

39 Case concerning the Gabcikovo-Nagymaros Project (Hungary v. Slovakia). Separate Opinion of Vice-President Weeramantry. (September 25, 1997), p. 90. Furthermore, Szabó, 2017, p. 271.

40 Case Pulp Mills on the River Uruguay (Argentina v. Uruguay). Judgment. (April 20, 2010), para. 177.

41 Case Pulp Mills on the River Uruguay (Argentina v. Uruguay). Judgment. (April 20, 2010), para. 75.

42 Case Pulp Mills on the River Uruguay (Argentina v. Uruguay). Judgment. (April 20, 2010), para. 76.

43 Case Pulp Mills on the River Uruguay (Argentina v. Uruguay). Judgment. (April 20, 2010), para. 77.

44 Case Pulp Mills on the River Uruguay (Argentina v. Uruguay). Judgment. (April 20, 2010), para. 177.

45 Case Pulp Mills on the River Uruguay (Argentina v. Uruguay). Judgment. (April 20, 2010), para. 177.

46 Case Pulp Mills on the River Uruguay (Argentina v. Uruguay). Judgment. (April 20, 2010), para. 177.

47 Case Pulp Mills on the River Uruguay (Argentina v. Uruguay). Judgment. (April 20, 2010), para. 177.

48 Case Pulp Mills on the River Uruguay (Argentina v. Uruguay). Judgment. (April 20, 2010), para. 185.

49 Certain Activities Carried Out by Nicaragua in the Border Area (Costa Rica v. Nicaragua). Judgment. (16 December 2015), para 104.

50 Case Pulp Mills on the River Uruguay (Argentina v. Uruguay). Judgment. (April 20, 2010), para. 193; Legality of the threat or use of nuclear weapons. Advisory Opinion (July 8, 1996), para. 29.

51 Case Pulp Mills on the River Uruguay (Argentina v. Uruguay). Judgment. (April 20, 2010, para. 193; Case concerning the Gabcikovo-Nagymaros project (Hungary v. Slovakia). Judgment. (September 25, 1997), para. 140.

52 Case Pulp Mills on the River Uruguay (Argentina v. Uruguay). Judgment. (April 20, 2010), para. 195; Case Pulp Mills on the River Uruguay (Argentina v. Uruguay). Separate opinion of Judge Greenwood.

(April 20, 2010), para. 3-5.

53 Case Pulp Mills on the River Uruguay (Argentina v. Uruguay). Judgment. (April 20, 2010), para. 76.

54 Dispute regarding Navigational and Related Rights (Costa Rica v. Nicaragua). Judgment (July 13, 2009), para. 79.

55 Dispute regarding Navigational and Related Rights (Costa Rica v. Nicaragua). Judgment (July 13, 2009), para 84.

56 Dispute regarding Navigational and Related Rights (Costa Rica v. Nicaragua). Judgment (July 13, 2009), para. 87.

57 Dispute regarding Navigational and Related Rights (Costa Rica v. Nicaragua). Judgment (July 13, 2009), para. 89.

58 Dispute regarding Navigational and Related Rights (Costa Rica v. Nicaragua). Judgment (July 13, 2009), para. 104.

59 Construction of a Road in Costa Rica along the San Juan River (Nicaragua v. Costa Rica). Judgment. (December 16, 2015), para 104.

60 Construction of a Road in Costa Rica along the San Juan River (Nicaragua v. Costa Rica). Judgment. (December 16, 2015), para 104.

61 Construction of a Road in Costa Rica along the San Juan River (Nicaragua v. Costa Rica). Judgment. (December 16, 2015), para 104.

62 Legality of the Threat or Use of Nuclear Weapons. Advisory Opinion. (July 8, 1996), para. 29.

63 Construction of a Road in Costa Rica along the San Juan River (Nicaragua v. Costa Rica). Judgment. (December 16, 2015), para 226.

64 Whaling in the Antarctic (Australia v. Japan: New Zealand intervening). Judgment. (31 March 2014), para. 43.

65 Whaling in the Antarctic (Australia v. Japan: New Zealand intervening). Judgment. (31 March 2014), para. 56-57.

66 Whaling in the Antarctic (Australia v. Japan: New Zealand intervening). Judgment. (31 March 2014), para. 56.

67 Whaling in the Antarctic (Australia v. Japan: New Zealand intervening). Judgment. (31 March 2014), para. 57.

68 Whaling in the Antarctic (Australia v. Japan: New Zealand intervening). Judgment. (31 March 2014), para. 58.

69 Whaling in the Antarctic (Australia v. Japan: New Zealand intervening). Judgment. (31 March 2014), para. 97.

70 Obligations of States in respect of Climate Change. Advisory Opinion. (23 July 2025). Para. 147.

71 Obligations of States in respect of Climate Change. Advisory Opinion. (23 July 2025). Para. 147. In that sense, are the obligations in FCCC and the Paris Agreement under the paradigm of activities begun in the past (diminishing effects of humans on environment) and violation of an international standard provoke international responsibility and reparation? Yes, they are.

72 Obligations of States in respect of Climate Change. Advisory Opinion. (23 July 2025). Para. 147.

73 Obligations of States in respect of Climate Change. Advisory Opinion. (23 July 2025). Para. 147.

74 Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from Their Utilization to the Convention on Biological Diversity, adopted 29 October 2010, entry into force 12 October 2014, United Nations Treaty Series 3000, p. 3.

75 The case of the potato provides a useful example. Introduced from the Americas to Europe, it became a key factor in improving basic food consumption across Europe after the sixteenth century (Mann, 2011); (Adams, 2012).

76 Dispute regarding Navigational and Related Rights (Costa Rica v. Nicaragua). Judgment (July 13, 2009). Para. 89.

77 Case concerning the Gabcikovo-Nagymaros project (Hungary v. Slovakia). Judgment. (September 25, 1997), para. 140.

78 Case concerning the Gabcikovo-Nagymaros project (Hungary v. Slovakia). Judgment. (September 25, 1997), para. 140.

79 Dispute regarding Navigational and Related Rights (Costa Rica v. Nicaragua). Judgment (July 13, 2009), para. 84.

80 Dispute regarding Navigational and Related Rights (Costa Rica v. Nicaragua). Judgment (July 13, 2009), para. 87.

81 Dispute regarding Navigational and Related Rights (Costa Rica v. Nicaragua). Judgment (July 13, 2009), para. 89.

82 Dispute regarding Navigational and Related Rights (Costa Rica v. Nicaragua). Judgment (July 13, 2009), para. 104.

83 Dispute regarding Navigational and Related Rights (Costa Rica v. Nicaragua). Judgment (July 13, 2009), para. 123.

84 Case Pulp Mills on the River Uruguay (Argentina v. Uruguay). Judgment. (April 20, 2010), para. 101.

85 Construction of a Road in Costa Rica along the San Juan River (Nicaragua v. Costa Rica). Judgment. (December 16, 2015), para 104: "it may now be considered a requirement under general international law to undertake an environmental impact assessment where there is a risk that the proposed industrial activity may have a significant adverse impact in a transboundary context, in particular, on a shared resource (Pulp Mils, p. 83, para. 204)".

86 Case concerning the Gabcikovo-Nagymaros project (Hungary v. Slovakia). Judgment. (September 25, 1997). Para. 140; Case concerning the Gabcikovo-Nagymaros project (Hungary v. Slovakia). Separate Opinion of Vice-President Weeramantry (September 25, 1997), pp. 88-111

87 Construction of a Road in Costa Rica along the San Juan River (Nicaragua v. Costa Rica). Judgment. (December 16, 2015). Para 104 states: "the specific content of the environmental impact assessment should be made in light of the specific circumstances of each case (…). Thus, to fulfil its obligation to exercise due diligence in preventing significant transboundary environmental harm, a State must, before embarking on an activity having the potential adversely to affect the environment of another State, ascertain if there is a risk of significant transboundary harm, which would trigger the requirement to carry out an environmental impact assessment (…) If the environmental impact assessment confirms that there is a risk of significant transboundary harm, the State planning to undertake the activity is required, in conformity with its due diligence obligation, to notify and consult in good faith with the potentially affected State, where that is necessary to determine the appropriate measures to prevent or mitigate that risk".

88 Case concerning the Gabcikovo-Nagymaros Project (Hungary v. Slovakia). Judgment. (September 25, 1997), para. 140