Fair Distribution of Environmental Benefits and Burdens Related to Access, Use and Enjoyment of Natural Resources

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Introduction

Even if not explicitly articulated, environmental justice has become an aspiration in most societies. People are increasingly and publicly asserting demands for environmental equality, meaningful community involvement in decisions impacting the environment, and recognition of the relevance of environmental issues to quality of life –all concerns that are an integral part of the concept of environmental justice.¹

The best-known definition of environmental justice may well be that used by the EPA, which embraces an approach that recognises the essential nature of distribution and participation. To the EPA, environmental justice means "fair treatment and meaningful involvement of all people regardless of race, colour, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies". This is complemented by definitions of "fair treatment" and "meaningful involvement".

Notably, though, environmental justice not only refers to the one-sidedness of the environmental impacts or risks borne by the most vulnerable members of society –it also encompasses the lopsided allocation of access to environmental benefits. While this brief will address both environmental burdens and benefits, it will place special emphasis on

¹ On environmental justice, see BOSSELMANN, K., "Ecological Justice and Law", in RICHARDSON, B. & WOOD, S. (Eds), *Environmental Law for Sustainability* (Hart Publishing, 2006) pp. 129 and ff.; SCHLOSBERG, D., *Defining Environmental Justice. Theories, Movements and Nature* (Oxford University Press, 2007), 238 pp.

² National Environmental Justice Advisory Council, "Meaningful Involvement and Fair Treatment by Tribal Environmental Regulatory Programs" (November, 2004), p. 5.

³ "Fair treatment" means that no group of people, including racial, ethnic, or socioeconomic groups, should bear a disproportionate share of the negative environmental consequences resulting from industrial, municipal, and commercial operations or the execution of federal, state, local, and tribal environmental programs and policies. "Meaningful involvement" means that: 1) potentially affected community residents have an appropriate opportunity to participate in decisions about a proposed activity that will affect their environment and/or health; 2) the public's contribution can influence the regulatory agency's decision; 3) the concerns of all participants involved will be considered in the decision-making process; and 4) the decision makers seek out and facilitate the involvement of those potentially affected. In: HILL, B., Environmental Justice, Legal Theory and Practice (Environmental Law Institute Press, 2009), p. 8.

the latter due to their close connection with the ecosystem services natural resources can provide. Indeed, certain regulatory aspects of environmental justice are more closely connected with environmental benefits –i.e., access, use, and development of natural resources- while in others the notion of environmental burden –i.e., the siting of hazardous or polluting industries- will be of greater importance.

While there is no question that environmental justice is fundamentally linked to distributive justice, it is not its only defining element. Most scholars identify at least two dimensions: one distributive, the other participatory or political.⁴ In other words, equal distribution of environmental burdens and benefits, is a concept with a direct link to distributive justice; and meaningful involvement, in turn, connects with the notion of procedural or political justice. Some scholars, including BOSSELMANN and SCHLOSBERG, also posit the concept of ecological justice.⁵ Others, like KUEHN, group environmental justice into distributive, procedural, corrective, and social categories.⁶ Similarly, EBBESON distinguishes between distributive, corrective, and procedural justice,⁷ and BULLARD identifies procedural, geographic, and social equality.⁸

While these dimensions illustrate the complexity and breadth of the concept, remarkably, each is somehow recognised in the legal system through a variety of norms. Indeed, for example, the law contains rules and principles on the *equal allocation of environmental burdens* and benefits that range from the fundamental right to equality and non-discrimination through to the obligation to compensate communities for the environmental burdens affecting it. On the other hand, *equal involvement in environmental decision-making*, is covered for example, under norms such as those mandating access to environmental information, prior informed consent with regard to certain activities, and requirements for civic participation in assessment of environmental impacts. Also covered are *recognition of the*

⁴ See SCHRADER-FRECHETTE, K., Environmental Justice. Creating Equality, Reclaiming Democracy (Oxford University Press, New York 2002), pp. 24 and ff.

⁵ BOSSELMANN, K., op. cit.; SCHLOSBERG, D., op. cit. These writers hold that the theoretical framework of environmental justice must be widened to encompass concern for the non-human natural world.

⁶ KUEHN, R., "A Taxonomy of Environmental Justice" in 30 ELR (Environmental Law Reporter, 2000), p. 10681 and ff.

⁷ EBBESON, J., "Introduction: Dimensions of Justice in Environmental Law", in EBBESON, J. & OKOWA, P. (Eds), *Environmental Law and Justice in Context* (Cambridge University Press, 2009), p. 2.

⁸ BULLARD, R. "Leveling the Playing Field through Environmental Justice", in *Vermont Law Review*, Volume 23, 1998-1999, pp. 457-458.

distinct identity of certain groups and their entitlement to fulfilment as members of society⁹ –i.e., acknowledgement of collective indigenous rights over natural resources- and conservation of ecosystem integrity, covered under the principle of intergenerational justice and the ecosystemic approach.¹⁰

In other words, while not expressly embodied in legal principle or statute, environmental justice is in fact present in the legal system through various norms of domestic, comparative and international environmental law. The intent of this paper is to identify principles and rules in domestic and international law incorporating dimensions and elements of environmental justice into regulations on access, use, and development of natural resources, with a view to their potential application to a case of environmental injustice in natural resource access and use.

Environmental Justice and Natural Resource Statutes

In Chile, water resource cases provide many an example of environmental injustice as to access, use, and development of natural resources.¹¹ Chilean water regulations are based on a constitutionally-protected private property right over "rights of use" granted to individuals. In other words, the applicable legal framework rests on the private property of the right to use a natural resource, even if it remains a public asset under the law.

A paradigmatic conflict, based on this regulation and that has sparked intense public debate in Chile is Pascua-Lama, a gold mining project undertaken by Canada-based Barrick Gold. This company intends to mine gold, silver and copper resources from mountains high in the Andes, in a glacier-covered area on the border with Argentina. These glaciers are the fountainhead for irrigation and preservation of local ecosystems and for the rivers flowing through the Huasco Valley, an area dotted with farming communities whose olive groves and vineyards yield export-grade olive oil and pisco

⁹ Recognition as an element of justice theory has been explored by U.S. scholars Nancy FRASER and Iris Marion YOUNG. Application to environmental justice theory has been proposed by scholars such as David SCHLOSBERG.

¹⁰ These principles relate to the ecological dimensions of environmental justice referred to above.

¹¹ See a description of key conflicts over water resources in LARRAÍN, S. & POO, P., Conflictos por el Agua en Chile. Entre los Derechos Humanos y las Reglas del Mercado, Programa Chile Sustentable, 2010, 360 pp. Factual information provided here is gleaned chiefly from this publication.

¹² A Chile-Argentina Mining Integration and Complementation Treaty signed in 2001 gave zero-tariff treatment to activities under the treaty. Pascua-Lama, in turn, was authorised under a 2004 binational Memorandum of Understanding. Neither apply to environmental issues, which remain subject to domestic laws

products.¹³ Also, especially affected is a Diaguita native community in the Upper Huasco River Valley, on whose ancestral grazing and farming lands the project is being built.

The project received the Environmental Impact Assessment System approval in 2006 and subsequently secured all relevant permits. Construction began in 2009.¹⁴ From the very start, the project laid bare the existence of a conflict of distributive and participatory justice with regard to access, use, and development of water and land resources. As to participation, the native community of the Upper Huasco River Valley contends that it was never consulted. Stakeholder involvement in decision-making only took place during the environmental assessment stage, 15 after Barrick confirmed the project and secured consent from Chile and Argentina. As to distributive justice, matters are even more complex. Prior to obtaining environmental clearances, Barrick concluded a compensatory agreement with Huasco River Valley farmers who had staunchly opposed the project. The agreement called for a US\$60-million payoff to be disbursed in US\$3 million instalments over 20 years "as compensation for possibly adverse impacts and effects directly or indirectly arising from the project". 16 It also included certain environmental commitments, such as preventing the acidification of downstream water resources. In addition, "the company undertook to build a US\$5-million regulation dam in Upper Río Carmen". 17 This agreement was harshly criticised by public opinion and project detractors, insofar as the compensation package in question was agreed outside the legal framework and failed to include all stakeholders. Moreover, Barrick gave funds to the regional government for construction of a public road from the project site to the town of Vallenar. This was criticised as detrimental to the independence of local authorities when assessing the environmental viability of the project.

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¹³ LARRAÍN, S. & POO, P., op. cit., pp. 149-158.

¹⁴ Construction was halted in 2013 by the Office of the Superintendent of the Environment, which penalised the company for environmental violations that must be remedied if construction is to resume.

¹⁵ A stage that does not contemplate early enough involvement to consider alternatives. This is but a brief window opened after a company files an environmental impact statement in which stakeholders can submit observations for the authorities to consider when making a final decision.

¹⁶ LARRAÍN, S. & POO, P., op. cit., p. 152.

¹⁷ Ibid.

Also absent from this case were recognition of native communities and their ancestral lands¹⁸ and an ecosystem approach to a project evaluated in two countries under two sets of standards.¹⁹

This case made quite evident the need to recognise and, where appropriate, adopt elements of environmental justice into environmental and natural resource statutes. This subject is addressed below.

The legal framework on access, use, and development of natural resources is essentially based on two institutions: ownership and sovereignty. Historically, most Western legal systems have looked to ownership to assign title, define use, and determine rights over the products of a resource. Internationally, this role is played by State sovereignty. In other words, access and use of natural resources are defined by sovereignty and ownership, albeit in different ways. Sovereignty refers to relations among States and ownership to relations between individuals or between them and the State.²⁰ These are two different legal institutions that in some cases —for example, the exercise of sovereignty over a territory and the natural resources it contains—pursue comparable goals, such as the exercise of regulatory authority over a given set of goods.²¹ The distributive role played in practice by both institutions accounts to a large extent for the basic structure of national and international societies.

As such, attaining the goals at issue requires identifying legal principles and rules on natural resource sovereignty and ownership capable of adding elements and dimensions of environmental justice. Not an easy proposition, however, as sovereignty and ownership are conceptually at odds with the tenets of environmental justice. As noted, environmental justice refers chiefly to equitably sharing of the benefits and burdens arising from access, use, and development of natural resources. But sovereignty and ownership do not consider equality as a factor in defining rights over resources. As NOLLKAEMPER holds, "Much of the discourse on justice in international relations and

¹⁸ The native community of the Upper Huasco River Valley lawfully owns most of the local territory. Certain portions, however, are registered to individuals or entities regarded as usurpers by the community. Barrick Gold, through their Chilean subsidiary, bought one of these properties for their gold mining project. ¹⁹ Significantly, the Chile-Argentina Memorandum of Understanding left the issue of shared water resources to the applicable international instruments, notably the Chile-Argentina Environmental Treaty and its Additional Protocol on Shared Water Resources. Nevertheless, this treaty is not applicable to this case as the waters affected by the project ar entirely on Chilean territory, in accordance with the water parting line. ²⁰ BARNES, R., *Property Rights and Natural Resources* (Hart Publishing, Oxford & Portland, Oregon, 2009) p. 11.

²¹ IBID., pp. 222-228.

international law is a direct challenge to state sovereignty. From the perspective of international justice, state sovereignty can be said to be prima facie unjust because it is at odds with resource distribution that is necessary for a just world."22 From a domestic perspective, the same holds true about justice and property.

That said, this brief holds that the goal is achievable insofar as sovereignty and ownership are not absolute and admit the limitations set by the law, especially environmental law. As such, identification and construction of rules of environmental justice on natural resources can be a highly significant process both for the evolution of environmental law and for the materialisation of a fairer social and environmental order.

Identifying rules and principles of environmental justice in natural resource statutes requires taking stock of distributive and participatory issues in matters of access, use, and development of natural resources. These issues, evident in the Pascua-Lama case, mainly concern assignment of access to different user types, distribution of uses competing for the resulting benefits, and adoption of decisions on the possible uses of a given resource. Significantly, these issues arise from the very characteristics that define natural resources as "common pool resources". 23 While these issues in natural resource management have been the subject of much study and analysis, their links to environmental justice have not been as scrutinised. As this paper considers these as issues of justice, it will attempt to identify and structure rules and principles of environmental justice relating to the legal arrangements governing ownership and sovereignty over natural resources.

Principles and Rules of Environmental Justice Related to Natural Resource Access, Use, and Development

As noted, the legal framework on natural resources establishes the regulations required to determine access, assignment, use and development. Determining the regulations most appropriate to attainment of these goals has been a leading concern of environmental law and policy. Traditionally, discussion has centred around instruments of command and

²² NOLLKAEMPER, A., "Sovereignty and Environmental Justice in International Law", in EBBESON, J. & OKOWA, P. (Eds), op. cit., p. 258.

²³ A vast literature discusses the nature of natural resources as "common pool resources". This literature posits that management of common pool resources has to do with the definition of ownership; that is, the determination whether natural resources are goods subject to domain and, if so, whether it is public or private. The various systems of natural resource management are reviewed based on this characterisation and rated for efficiency under different circumstances. See OSTROM, E., Governing the Commons. The Evolution of Institutions for Collective Action (Cambridge University Press, 1990), pp. 1 and ff.

control (such as environmental, quality and emission standards) or incentive-based economic instruments (i.e., fishing quotas).²⁴ Yet, the discussion can also be framed from a different perspective: evaluate these norms under the light of environmental justice. As noted, such a stance has generally not been adopted in natural resource statutes.²⁵

Below we document certain natural resource standards adopting dimensions and elements of environmental justice, and note their relevance to addressing the various issues identified. Significantly, international law is much more compelling about adopting such standards than domestic law —or at least Chilean domestic law.

1. Principles and Rules of International Law

Some of the most noteworthy principles and rules of international law include:

The obligation to Exercise Sovereignty Over Natural Resources in the Interest of National Development and the Well-Being of the People

More often than not, sovereignty over natural resources is exercised in the interest of a country's own rulers or élites rather than the population at large. This state of affairs has been termed by Thomas POGGE as the "international resource privilege", one that impoverishes and dispossesses the population of a country.²⁶ This is a clear case of injustice in terms of both equitable sharing of benefits arising from natural resource use and of the denial of the political rights of the peoples that constitute a State.

Many scholars hold that the exercise of sovereignty over natural resources ought to include a commitment to the common good.²⁷ Yet, there is no unanimity on how to achieve such a goal, since it hinges to a large extent on title to the rights granted by the principle of permanent sovereignty over natural resources (PSNR). Some assert that the

²⁴ See ROSE, C. "Common Property, Regulatory Property and Environmental Protection: Comparing Community-Based Management to Tradable Environmental Allowances", in: NATIONAL RESEARCH COUNCIL, Committee on the Human Dimensions of Global Change, OSTROM, E., DIETZ, Th., DOLSAK, N., STERN, P., STONICH, S., & WEBER, E. (Eds), *The Drama of the Commons* (National Academy Press, 2002), pp. 233-257.

²⁵ That said, some scholars compellingly apply this approach. See, for example: EBBESON, J. & OKOWA, P., op. cit.; MUTZ, K., BRYNER, G. & KENNEY, D. (Eds) *Justice and Natural Resources. Concepts, Strategies and Applications* (Island Press, Washington, Covelo, London, 2002), 368 pp.

²⁶ POGGE, T., "Qué es la Justicia Global" in *Revista de Economía Institucional*, Vol. 10 Nº 19, segundo semestre 2008, Colombia, p. 104.

²⁷ DURUIGBO, Y., "Permanent Sovereignty and Peoples Ownership of Natural Resources in International Law", in *George Washington International Law Review*, Vol. 38, 2006, pp. 33-100; BLANCO, E. & RAZZAQUE, J., *Globalisation and Natural Resources Law. Challenges, Key Issues and Perspectives* (Edward Elgar, 2011), pp. 33-84.

way to ensure that sovereignty is exercised in the interest of the common good is to recognise that it resides with the people.²⁸ As the argument goes, when sovereignty is exercised solely by the government, there is no guarantee that use of natural resources will benefit the population at large rather than merely the national élites. Others hold that sovereignty resides with the State, which exercises it through the national government, or alternatively, through the government in conjunction with the people.²⁹ Nico SCHRIJVER concurs with the latter stance, noting that the principle of PSNR has twin roots -the sovereignty of States and the self-determination of peoples.³⁰

The notion of an obligation to ensure the well-being of the people when exercising sovereignty over natural resources is reflected in a series of relatively recent breakthroughs in international law.³¹ Certainly, an obligation requires an obligor. As Emeka DURUIGBO posits, States must guarantee natural resource use along these lines, assuming to this effect the role of trustees or stewards of natural resources within their territory.³² In exercising this role, States acquire a fiduciary duty to their citizens that must be discharged in good faith.

Implementing this obligation, however, is far from the norm in countries whose legal system is based on natural resource management systems that rule out common or collective ownership, or where limits on public or private ownership are weak or mechanisms for participation in related decision-making are lacking. In the Pascua-Lama case, save for a few compensatory measures adopted as part of the environmental impact

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²⁸ Based, inter alia, on the rights covenants of 1966, both of whose articles 1(2) state: "All peoples may, for their own ends, freely dispose of their natural wealth and resources without prejudice to any obligations arising out of international economic co-operation, based upon the principle of mutual benefit, and international law. In no case may a people be deprived of its own means of subsistence". DURUIGBO, Y., op. cit., p. 46.

²⁹ A view grounded in the progression of international human rights law, as noted, for example, in article 1(1) of UN General Assembly Resolution 1803 on the principle of PSNR: "The right of peoples and nations to permanent sovereignty over their natural wealth and resources must be exercised in the interest of their national development and of the well-being of the people of the State concerned". IBID., p. 45.

³⁰ SCHRIJVER, N., Sovereignty over Natural Resources. Balancing Rights and Duties (Cambridge University Press, 1997) pp. 370-371. "This statist orientation in the evolution, interpretation and application of the principle of permanent sovereignty can well be understood as part of the economic and political emancipation process of developing countries, but equating peoples and States undoubtedly further strengthens the State and subordinates the rights of the people to the whims of those in power. However a recent tendency can be discerned indicating that the principle of self-determination and the rights of peoples in a non-colonial context are receiving revived attention (...) if this tendency is consolidated, the principle of permanent sovereignty will return to its two roots and the two-fold aspirations derived from these roots. This would certainly be a laudable development, as it implies that States should be instruments to serve the interests of peoples and not vice-versa".

³¹ See IBID., pp. 306-364.

³² DURUIGBO, Y., op. cit., pp. 65-67.

assessment process, the Chilean State³³ has yet to ensure equitable sharing of the benefits issuing from the use of water resources or meaningful involvement in decision-making regarding relevant natural resources issues.

The Obligation to Exercise Sovereignty Over Natural Resources While Respecting Indigenous Rights and Interests

The all-too-common absence of recognition in domestic law of indigenous rights over natural resources within their lands is an issue of environmental justice insofar as, in addition to the distributive and participatory aspects, it infringes an essential element of justice theory –the recognition entailed in granting special value to certain vulnerable communities or groups in society. In the Pascua-Lama case, the utter lack of recognition of the Diaguita people of the Upper Huasco Valley during the initial environmental impact assessment process was among the issues sparking the sharpest controversy. Assertion of community land rights is a reflection of the presence of critical issues of access and use of native lands and natural resources.

The notion of "people" in the previous section encompasses the entire population of a given country, without distinction.³⁵ However, populations are often not homogeneous and tend to include a range of diverse peoples or minorities, including indigenous peoples.

In the past few decades, international human rights law has moved to recognise the rights of such peoples.³⁶ A reflection of this progression is ILO Convention 169, which recognises, inter alia, native rights over lands, territories, and natural resources. These rights stand beyond the traditional structure of human rights –which are individual in nature– and are to be collectively exercised and protected.³⁷

While these rights are seemingly similar to those granted the State by the principle of PSNR, there is a fundamental difference: indigenous peoples hold no rights under international law.³⁸ Relations between States and indigenous peoples were traditionally

³⁶ ANAYA, J., *Indigenous Peoples in International Law* (Oxford University Press, Second Edition, 2004), 408 pp.

³³ Chilean environmental law was significantly strengthened by stronger regulatory and jurisdictional bodies introduced in 2013. Natural resource regulations have not been amended.

³⁴ ILO Convention 169, which mandates consultation with affected indigenous communities, was not yet in effect when Pascua-Lama underwent environmental impact assessment.

³⁵ DURUIGBO, Y., op. cit., p. 52.

³⁸ An indigenous right to self-determination is contemplated in no international instrument. SCHRIJVER, N., op. cit., pp. 318-319.

considered to be matters of domestic law. However, the progression of international law makes it possible to contend that at present this issue is indeed of relevance under international law,³⁹ insofar as States can and are being held accountable for failing to uphold the rights and interests of indigenous peoples.⁴⁰

The Principle of Equitable Use of Shared Natural Resources

A classic issue of environmental justice is equitable sharing among multiple users. In Pascua-Lama, valley farmers, the native community and the mining company all competed for the benefits afforded by local water resources, yet without a principle or rule of domestic law –such as identified here—to guide definition or priority of use.

The principle of equitable use addresses this issue and is widely accepted in international law on the sharing of watercourses, aquifers, fisheries, and the continental shelf.⁴¹ It is based on the notion of equal distribution. When two or more States share a natural resource,⁴² international law recognises that the interests of all must be upheld based on equitable standards and procedures.⁴³

A particularly relevant application of this principle is the equitable use of lakes and rivers serving as national boundaries or existing in more than one State.⁴⁴ Per this principle, all States sharing a lake or river are entitled to equitable and reasonable use. Conversely, none can use the waters in a manner that interferes with the legitimate interests of other

³⁹ See United Nations Declaration on the Rights of Indigenous Peoples, adopted by the General Assembly in 2007 (Resolution 61/295): "...the rights affirmed in treaties, agreements and other constructive arrangements between States and indigenous peoples are, in some situations, matters of international concern, interest, responsibility and character".

⁴⁰ See, for example, Mayagna (Sumo) Awas Tingni Community v. Nicaragua (2001); Yakye Axa Indigenous Community v. Paraguay (2005); Sawhoyamaxa Indigenous Community v. Paraguay (2006); The Saramaka People v. Suriname (2007); Xákmok Kásek Indigenous Community v. Paraguay (2010). See decisions in www.corteidh.or.cr.

⁴¹ SHELTON, D., "Describing the elephant: international justice and environmental law" in EBBESON, J. & OKOWA, P. (Eds), op. cit., p. 647. This principle has been asserted by the International Court of Justice in at least the following cases: Gabcikovo-Nagymaros Waterworks (Hungary v. Slovakia), 1997, and in cases of jurisdiction over fisheries (United Kingdom v. Iceland; Germany v. Iceland) 1974. It has also been developed by the UN 1997 Convention on the Law of Non-Navigational Uses of International Watercourses (the UN Watercourses Convention) and the Resolution adopted by the UN General Assembly 63/124, The Law of Transboundary Aquifers, 15 January, 2009.

⁴² The scope of the term "shared natural resources" has been widely discussed in international law without consensus on a definition, notably because of the potential for limiting national sovereignty. However, the evident fact that certain resources lie across national boundaries requires adoption of legal norms and decisions. RAINEE, J. "The Work of the International Law Commission on Shared Natural Resources: The Pursuit of Competence and Relevance", in *Nordic Journal of International Law*, Vol. 75, 2006, pp. 322-323.

⁴³ BILDER, R., "International Law and Natural Resources Policies", in *Natural Resources Journal*, Vol. 20, 1980, p. 459.

⁴⁴ Ibid.

riparian States. 45 Over 300 instruments regulating the use of international watercourses enshrine this principle, 46 most notably article 547 of the UN Watercourses Convention. 48

Significantly, the Convention names the factors to consider in defining equitable and reasonable use. First, it notes that, in the absence of agreement or custom to the contrary, no use enjoys inherent priority over others. It further notes that conflicting uses of an international watercourse will be resolved with reference to the factors in the Convention, most especially the requirements of vital human needs.⁴⁹ This provision stands as clear affirmation of the priority of the public interest in natural resource regulation. Vital human needs have been interpreted to include access to water for drinking and food production, with emphasis on the social and economic nature of the factors identified in article 6.50

This is, therefore, a principle of distributive justice that helps account for and balance the relevant circumstances of each case when determining distribution of burdens and benefits arising from access and use of shared natural resources.

Distribution of Benefits Arising From Use and Development of Natural Resources

Another aspect relating to the distributive dimension of environmental justice is the sharing among competing stakeholders of benefits arising from use and development of a given natural resource. In the Pascua-Lama case, Barrick Gold is set to derive vast economic benefits from the mining of local mineral deposits. The Chilean legal system requires payment of taxes and imposes certain compensatory measures, but it does not

46 Ibid.

⁴⁵ Ibid.

⁴⁷ Article 5. Equitable and reasonable utilization and participation.

^{1.} Watercourse States shall in their respective territories utilize an international watercourse in an equitable and reasonable manner. In particular, an international watercourse shall be used and developed by watercourse States with a view to attaining optimal and sustainable utilization thereof and benefits therefrom, taking into account the interests of the watercourse States concerned, consistent with adequate protection of the watercourse.

^{2.} Watercourse States shall participate in the use, development and protection of an international watercourse in an equitable and reasonable manner. Such participation includes both the right to utilize the watercourse and the duty to cooperate in the protection and development thereof, as provided in the present Convention.

as it has obtained 24 adopted, of the required 35 treaties.an.org/Pages/ViewDetails.aspx?src=IND&mtdsg_no=XXVII-12&chapter=27&lang=in#1. ⁴⁹ Article 10(2) of the Convention.

⁵⁰ BARNES, R., op. cit., p. 233. These include geographic, hydrographic, hydrological, climatic, ecological and other factors of a natural character; the social and economic needs of the watercourse States concerned; the population dependent on the watercourse in each watercourse State; the effects of the use or uses of the watercourses in one watercourse State on other watercourse States; existing and potential uses of the watercourse; conservation, protection, development and economy of use of the water resources of the watercourse and the costs of measures taken to that effect; and the availability of alternatives, of comparable value, to a particular planned or existing use.

require distribution of benefits. This issue, however, is addressed in international law in several issues such as genetic and natural resources in native lands.

Chief among these is the principle in article 15(7) of the Convention on Biological Diversity (CBD),⁵¹ which includes a mechanism for equitable sharing of benefits arising from access and use of genetic resources, including related traditional knowledge.

ILO Convention 169 also recognises this right by establishing in article 15(2) a native right to participate in the benefits arising from development and use of public-domain natural resources in their lands and territories.⁵²

Prior Informed Consent for Use and Development of Natural Resources

Importantly, international law explicitly enshrines the right to meaningful involvement in decision-making pertaining to access and use of natural resources over which rights exist. While scopes may vary, many international instruments on the environment and natural resources, notably those mentioned above, entrench this right. CBD Article 15(5) states: "Access to genetic resources shall be subject to prior informed consent of the Contracting Party providing such resources, unless otherwise determined by that Party." Articles 6 and 15(2) in ILO Convention 169 require consultation before undertaking or permitting any programmes for the exploration or exploitation of resources pertaining to indigenous lands.

While these are different requirements -prior informed consent sets a higher standard than consultation- both provisions recognise the political dimension of environmental justice, especially participation and recognition. In the Chilean example at hand, ILO Convention 169 was adopted only in 2009 and thus did not apply.

other utilization of genetic resources with the Contracting Party providing such resources. Such sharing shall be upon mutually

as a result of such activities.

⁵¹ "Each Contracting Party shall take legislative, administrative or policy measures, as appropriate (...) with the aim of sharing in a fair and equitable way the results of research and development and the benefits arising from the commercial and

⁵² Article 15(2): In cases in which the State retains the ownership of mineral or sub-surface resources or rights to other resources pertaining to lands, governments shall establish or maintain procedures through which they shall consult these peoples, with a view to ascertaining whether and to what degree their interests would be prejudiced, before undertaking or permitting any programmes for the exploration or exploitation of such resources pertaining to their lands. The peoples concerned shall wherever possible participate in the benefits of such activities, and shall receive fair compensation for any damages which they may sustain

2. Principles and Rules of Domestic Law

While elements of environmental justice are less evident in domestic and comparative natural resource statutes, an analysis of applicable regulations can establish a basis for rules of environmental justice. Proposed and identified below are some rules structured or gleaned from Chilean statutes on natural resources. As will be shown, most are not part of the regulatory framework on water and have not been brought to bear in the conflict described here. However, they stand as examples of what could eventually be adopted into various areas of domestic natural resource regulations.

Assignment of Access to Natural Resources Based on Open and Public Mechanisms

In the Chilean legal system, assignment of rights over natural resources is contingent on the applicable ownership regime (i.e., public or private).⁵³ Resources not privately owned are generally assigned by the State by means of the free recognition of historical rights or directly and indefinitely to the first claimant. Historical rights over quotas are recognised in matters of fishery resources and atmospheric emissions authorised in areas impacted by air pollution.⁵⁴ Mining and water resources are generally assigned freely for an indefinite term to the first claimant. In other words, the criteria used to assign access to natural resources are generally the historical exercise of an economic activity or the timing of the application. By and large, no compensation or time frame is required nor does the assignment process include evaluating the purpose of the requested access or use.

To be sure, assignment is based on rules of distribution that provide for no stakeholder equality or meaningful involvement. In addition, it does not contemplate an ecosystem approach that can assist authorities in making determinations that take proper account of natural conditions.

Chilean statutes governing access to natural resources are in general not guided by norms of environmental justice. However, competitive bidding practices introduced in recent times may yet help insert elements of environmental justice into the relevant statutes.⁵⁵

⁵³ Excluding resources that cannot be owned, such as air or unregulated genetic resources to which no one holds title.

⁵⁴ Historical rights have also been recognised over indigenous lands and waters through mechanisms granting community rights over natural resources subject to ancestral use.

⁵⁵ Competitive bidding has been used to grant geothermal energy concessions.

Competitive bidding appears to be a fairer option inasmuch as it allows the setting of conditions delimiting the purpose of access and opens up a participatory process with involvement from all interested stakeholders.

Preferential or Priority Use of Resources

When granting right-of-use, the Chilean Water Code does not allow for preferential or priority use of resources.⁵⁶ The only statute setting such a condition concerns regulation of seaboard use and gives authorities the power to opt for maritime concessions –i.e., those in publicly-owned beaches, beach areas and the ocean floor as well as in waters within and outside harbour areas- best representing the preferential uses provided for in seaboard zoning regulations.⁵⁷ Seaboard zoning is intended to strike a balance between activities conducted or likely to be conducted in such areas. It rests on the assumption that this goal is best achieved by taking due account of geographical conditions –such as natural harbours, proximity to urban centres, local weather conditions, accessibility- that can be determinants for specific uses of seaboard areas or zones.⁵⁸

This rule might help incorporate environmental and social factors into determination of possible natural resource uses. Additionally, it requires planning resource use in manners that are compatible with a range of activities.

Right of Use Over Limited Quantities of a Natural Resource

This rule can be structured from regulations on inland waters and aquaculture. While the Chilean Water Code does not refer to inland waters as such, an amendment introduced in 2005 requires applicants to show a "need" to extract the amount requested. Authorities can therefore decline to grant right of use if no need to use a certain volume can be proven. ⁵⁹ As to aquaculture concessions, the law also sets a limit on size. ⁶⁰

⁵⁶ As opposed to, for example, German law, which requires weighing all impacts and requirements of use to ensure that all uses remain or are again possible at equal or higher rates. This establishes an approach to addressing issues of environmental distribution under justifiable, previously defined principles. See SCHMEHL, A., "La justicia distributiva ambiental. Los problemas y principios de una asignación territorial justa de la calidad ambiental y de las opciones de utilización del medio ambiente", in BERMÚDEZ, J. & HERVÉ, D., *Justicia Ambiental, Derecho e Instrumentos de Gestión del Espacio Marino Costero* (LOM Ediciones, 2013), p. 81.

⁵⁷ Maritime Concession Regulations, Ministry of Defence Executive Order 2(2005).

⁵⁸ General Objectives, National Seaboard Use Policy Directive, Executive Order 475(1994).

⁵⁹ Or certainly, if no such volume exists.

⁶⁰ The Fisheries and Aquaculture Act provides that "[N][o] aquaculture concessions over more than 20 per cent of the area available in a particular region may be requested..."

Rules restricting use of a resource to limited quantities can help incorporate elements of distributive justice into regulations, insofar as it sets aside resources for other parties.

Areas Set Aside for Special Uses

This rule consists of dividing a territory into areas destined for a range of purposes, notably for reasons of environmental protection and economic use of the environment.⁶¹ This distributive structure is grounded on preserving the natural characteristics of selected areas;⁶² counterbalancing contaminating activities by strictly protecting others (i.e., large-scale offsets),⁶³ and protecting traditional or subsistence uses by certain groups.

In addition to habitat protection and conservation areas, a range of Chilean statutes apply this rule to protection of certain traditional uses of natural resources. These include Benthic Resource Development and Management Areas (AMERB),⁶⁴ territorial waters reserved for artisanal fisheries,⁶⁵ and Aboriginal Marine Coastal Areas (ECMPO).⁶⁶ These statutes grant right of use over natural resources within a specific zone. Rather than ownership rights, they are intended to grant right of use to groups possessing certain special characteristics in order to support a particular utilisation of the resources in question. In some cases, such as Aboriginal Marine Coastal Areas, an additional aim is to protect resources from unwanted types of exploitation.

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⁶¹ SCHMEHL, A., op. cit., p. 79.

⁶² Ibid., p. 80.

⁶³ Ibid.

⁶⁴ A management scheme under the Fisheries and Aquaculture Act granting artisanal fishermen exclusive right of use and exploitation of benthic resources within a five-mile coastal or inland water zone.

⁶⁵ A five-mile coastal zone reserved for artisanal fisheries under the Fisheries and Aquaculture Act.

⁶⁶ A delimited marine area under Law 20.249(2008). It is administered by indigenous communities or associations whose members have customarily used such areas.

In Conclusion

In Chile, natural resource regulations are fundamentally concerned with promoting resource use and development. To ensure sustainability, environmental protection provisions were added a few decades ago. On the whole, however, Chilean statutes lack rules ensuring that environmental burdens and benefits arising from access and use of resources are equitably shared.

This approach has been missing from natural resource regulations insofar as these are based on institutions, such as ownership and State sovereignty that tend not to contemplate rules of equality. Yet, in recent decades international law has adopted principles and rules limiting State sovereignty over natural resources with a view to addressing related issues of justice. National statutes, for their part, face the need to set limits on public or private ownership of natural resources. In countries such as Chile, however, this process remains incipient.

This brief was intended to identify examples of environmental injustice with regard to natural resource access and use, as well as certain principles and rules of environmental justice in the applicable statutes. As such, with Gary BRYNER, we hold that environmental justice considers two issues:⁶⁷ first, the realisation of the original goals of the environmental justice movement - developed in the United States asserting that minority and low-income communities are disproportionately exposed to environmental risk-; and second, and perhaps most evidently nowadays, that minority and low-income communities derive fewer benefits from natural resource access and use policy. Both are an expression of extant inequality in the distribution of environmental burdens and benefits in society.

⁶⁷ BRYNER, G., "Assessing Claims of Environmental Justice", in MUTZ, K, et al., op. cit., p. 32.