

# Measuring environmental injustice: how ecological debt defines a radical change in the international legal system

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## Abstract

This paper takes ecological debt as a measure of environmental injustice, and appraises this idea as a driving force for change in the international legal system. Environmental justice is understood here as a fair distribution of charges and benefits derived from using natural resources, in order to provide minimal welfare standards to all human beings, including future generations. Ecological debt measures this injustice, as an unfair and illegitimate distribution of benefits and burdens within the social metabolism, including ecologically unequal exchange, as a disproportionate appropriation and impairment of common goods, such as the atmosphere. Structural features of the international system promote a lack of transparency, control and accountability of power, through a pro-growth and pro-freedom language. In theory, this discourse comes with the promise of compensation for ordinary people, but in fact it benefits only a few. Ecological debt, as a symptom of the pervasive injustice of the current balance of power, demands an equivalent response, unravelling and deconstructing real power behind the imagery of equally sovereign states. It claims a counterhegemonic agenda aiming at rebuilding international law from a pluralist, 'third world' or Southern perspective and improving the balance of power. Ecological debt should not only serve as a means of compensation, but as a conceptual definition of an unfair system of human relations, which needs change. It may also help to define the burdens to be assumed as costs for the change required in international relations, i.e. by promoting the constitutionalization of international law and providing appropriate protection to human beings under the paradigms of sustainability (not sustainable development) and equity.

**Key Words:** environmental justice, ecological debt, international legal system

## Résumé

Ce document prend la dette écologique comme une mesure de l'injustice environnementale, et évalue cette idée comme une force motrice pour le changement dans le système juridique international. La justice environnementale est comprise ici comme une répartition équitable des charges et des avantages découlant de l'utilisation des ressources naturelles, dans le but de fournir des normes minimales de bien-être à l'humanité tout entière, y compris les générations futures. La dette écologique est une mesure de cette injustice, comme une distribution injuste et illégitime des avantages et des charges dans le métabolisme social. Il comprend l'échange écologiquement inégal, comme une appropriation disproportionnée et la dépréciation des biens communs, tels que l'atmosphère. Les caractéristiques structurelles du système international favorisent un manque de transparence, le contrôle et la responsabilité du pouvoir, par le biais d'un pro-croissance et la langue pro-liberté. En principe, ce discours est livré avec la promesse de compensation pour les gens

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ordinaires, mais en fait, il ne profite qu'à quelques-uns. La dette écologique, comme un symptôme de l'injustice de l'équilibre actuel du pouvoir, exige une réponse équivalente, démêler le vrai pouvoir derrière l'imagerie des Etats également souverains. Il revendique un programme qui est anti-hégémonique, visant à la reconstruction du droit international d'un «tiers monde» ou la perspective du Sud, et l'amélioration de l'équilibre du pouvoir. La dette écologique ne doit pas seulement servir comme un moyen de compensation, mais comme une définition conceptuelle d'un système injuste des relations humaines, qui a besoin de changement. Il peut également aider à définir les charges, qui sont en fait les frais, pour le changement nécessaire dans les relations internationales, à savoir par la promotion de la constitutionnalisation du droit international et de fournir une protection appropriée aux êtres humains dans les paradigmes de la durabilité (mais pas le développement durable) et l'équité.

**Mots-clés:** justice environnementale, dette écologique, système juridique international

## Resumen

Este artículo ve la deuda ecológica como una medida de la injusticia ambiental y considera que es una idea que puede llevar a cambios en el sistema legal internacional. La justicia ambiental sería una distribución equitativa de los beneficios y de los daños que derivan de usar los recursos naturales para conseguir unos standards mínimos de bienestar para todos los seres humanos, incluidas las próximas generaciones. La deuda ecológica se ve entonces como una herramienta para medir la injusticia ambiental. La deuda ecológica expresa una distribución no equitativa e ilegítima de los beneficios y las cargas del metabolismo social, incluidos el intercambio ecológicamente desigual y la apropiación y los daños a los bienes comunes como, por ejemplo, la atmósfera. El actual sistema de relaciones internacionales tiene características estructurales que promueven falta de transparencia, control y responsabilidad del poder, disimulada por un lenguaje de libertad y crecimiento económico. En teoría, este discurso viene junto con la promesa de compensación para la gente pero de hecho solo beneficia a unos pocos. La deuda ecológica, como síntoma de la injusticia generalizada en la actual balanza de poder, requiere una respuesta equivalente que explicita y deconstruya el poder real que está detrás de la imagen de los estados soberanos. Reclama una agenda contra-hegemónica dirigida a edificar un nuevo derecho internacional pluralista desde una perspectiva del Sur o del "tercer mundo" que mejore y aumente el control del poder. La deuda ecológica no debe servir meramente como un método de compensación sino que define un sistema injusto de relaciones humanas que debe cambiar. Por tanto, el concepto de deuda ecológica debe ayudar a definir los daños que han de ser considerados costos para que haya ese cambio en las relaciones internacionales, es decir, promover la constitucionalización del derecho internacional y dar la protección adecuada a los seres humanos bajo los paradigmas de la sustentabilidad (no del "desarrollo sustentable") y de la equidad.

**Palabras clave:** justicia ambiental, deuda ecológica, del sistema jurídico internacional

## 1. Introduction

Under the paradigm of sustainable development, current international law has been unable to shape a real or equitable answer to the global ecological crisis. The idea of *ecological debt* highlights the inequality and unsustainability of the current system of international relations as a framework of global social exchange. Ecological debt expresses an unfair and illegitimate distribution of benefits and burdens within the social metabolism,<sup>2</sup> including ecological unequal exchange and disproportionate occupation and damaging of common goods, such as the atmosphere. The goal of this paper is to approach ecological debt from a legal perspective, using this idea as a *leitmotiv* in describing the current legal framework of international relations. Portraying ecological debt as a method to measure global injustice, we will then briefly propose an alternative framework for governance of the Earth system, based on pluralism and constitutionalism as more equitable discourses of global governmentality for sustainability.<sup>3</sup>

<sup>2</sup> Regarding the idea of *social metabolism*, see Fischer-Kowalski (1998: 61) and Fischer-Kowalski and Hüttler (1998: 107).

<sup>3</sup> On the distinction between the notions of governance and governmentality, Löwbrand *et al.* (2009) sustain that "while the governance concept is concerned with the loci and modes of governing, the governmentality concept draws attention to the systematic thinking that renders different governing strategies possible."

Our main point is that global institutional structures favour ecologically unequal exchange that cannot be comprehensively addressed by minor adaptations of existing international regimes (Brunnée 2009). On the contrary, addressing these shortcomings in the global distribution of goods and harms of social metabolism will require a profound reconceptualization of global governance in communitarian terms (Harris 2011). Admittedly, claims like these risk being easily dismissed as wishful thinking. Yet, international law has been described as essentially being "what international lawyers do and how they think", in a permanent epistemic dilemma between cynicism and commitment (Koskenniemi 2011: 293). In this tension between apology and utopia, we tend to agree with those who regard the furtherance of a broad consensus toward the formal recognition of the environment as a global public good, combined with an enhanced human rights approach to international environmental regimes, as a pragmatic first step in this direction (Boyle 2012).

## 2. Ecological debt and environmental justice

*Environmental justice* developed as a concept within the civil rights movement in the United States during the 1980s. The social mobilization around the PCB landfill in Warren County, North Carolina, is considered as the constitutive moment of the environmental justice movement, which gained momentum with the drafting of the Principles of Environmental Justice, during the First National People of Colour Environmental Leadership Summit, in October 1991 (Bosselmann 1999: 30). The environmental justice movement claimed that exposition to environmental degradation was disproportionately greater for non-white communities (Weinberg 1998). Based on the reproach for the incapacity of mainstream public policies to equitably address assignment shortcomings in low-income communities, the environmental justice movement's fundamental claim was also easily transferable to the international arena (Anand 2004: 15).

In this broad setting the idea of environmental justice was expanded to deal jointly with all distribution conflicts associated with global social metabolism as a whole (Weisz 2007). The point here is to address not only the distribution of harms, but also of goods (Jaria i Manzano 2012a). Current global social metabolism, given the enhancement of technological possibilities, the dimension of exchange of matter and energy, and the anthropic transformation of environment, is increasing inequalities between human groups (Margalef 2000: 330). For this reason, it is appropriate to address governance of social metabolism in terms of distributive justice, i.e. environmental justice in a wide sense. Ecological debt is conceived here as a 'measure' of historical environmental injustice.

Activists advanced the notion of ecological debt in the Global Forum that was held parallel to the 1992 UN Conference on Environment and Development, as a tool to compensate historical liabilities from the North toward the South and promote global justice (Mickelson 2007: 274-275). Clearly inspired by the concept of financial debt, social movements envisioned ecological debt as a means of measuring the spoliation of peripheral societies in the global economic system. In a nutshell, ecological debt is presented as a claim to calculate and compensate the differential in favour of the system's periphery in the accounting of its exchange with the system's centre, based on the past and ongoing plundering of natural resources and traditional know-how, and use of the share of commons corresponding to peripheral countries.<sup>4</sup>

This definition, however, does not provide for a thorough construction of ecological debt as a legal concept. Paredis *et al.* (2008: 48) suggest such a legal definition in three cumulative steps. According to them, the ecological debt of a given state would consist of:

1. The ecological damage caused over time by that state in other states or areas under the jurisdiction of other states through its production and consumption patterns.
2. (and/or) The ecological damage caused over time by that state in ecosystems beyond its national jurisdiction through its production and consumption patterns.
3. (and/or) The exploitation or use over time of ecosystems and goods belonging to ecosystems by that state at the expense of the rights to those ecosystems of the states or individuals.

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<sup>4</sup> <http://www.deudaecologica.org/Que-es-Deuda-Ecologica>

At first sight, this definition raises two legally relevant issues. In the first place, it raises the question of the valuation and calculation of a given state's liability (1), that is to say, the amount of favourable flow in relation to the social metabolism of that state. In addition, it requires finding out who the creditor is and to establish with sound reasons that states have indeed to be considered creditors (2), a task that may not be easy in all three steps of the previous definition. Whereas the first definition clearly implies an issue of inter-state compensation, the second one regards this as a mere hypothesis and in the third one it is hard to establish precisely who the creditor is. In contrast thereto, the debtor can be easily portrayed as a state from the capitalist world-system's centre that benefits from unequal terms of exchange and favourable material flows from outside. Despite practical issues that arise in defining debtors and creditors, there are no major conceptual difficulties in conceiving ecological debt as a credit relation. Moreover, it is easy to define ecological debt as a result of unjust enrichment and, for that matter, an object of quasi-contract, a legal institution well known in civil law systems, and now incorporated into common law as well (Sullivan 1975: 2).

Regarding practical issues, it is first appropriate to address the problem of how to value and calculate ecological debt. This question raises an additional, fundamental debate on value commensurability or, rather, incommensurability (Gerber 2014). This debate goes beyond the scope of the present article. Suffice it to say, however, that we consider this to be one of the crucial areas in which the international and domestic legal orders need to open up to non-hegemonic conceptions so as to accommodate global society's plurality and heterogeneity, fostering in this way a systemic change toward the furtherance of global justice (Rajagopal 2003).

At the same time, the acknowledgment of value incommensurability is not incompatible with the deployment of a multiplicity of valuation languages, including monetary accounting where mutually agreed. In this sense, one could try to measure in monetary terms the unaccounted externalities that lead to ecological liability, such as gross imports of material, free acquisition of ancestral knowledge, exports of emissions and wastes, and so on.<sup>5</sup> An overall consensus on the languages of valuation would indeed ease the way to overcome the first issue—establishing the unit of valuation—but not the second one: the actual calculation of liabilities. Again, this second issue ought to be addressed through an open and participative political negotiation process, backed by sound multidisciplinary scientific advice (Gerber 2014). In any case, mirroring ecological debt in financial debt would seem to give way to monetarization, which is a clear bias in terms of valuation languages, and to be avoided.<sup>6</sup>

In legal terms, however, the fundamental issue with the tentative definition offered by Paredis *et al.* (2008) remains the definition of the debtor, i.e. the person or entity obliged to compensate. In the first place, broadly speaking, states and inter-governmental organisations are the only subjects capable to undertake obligations under international law. In practice, this implies that the taxpayers of a debtor state would have to bear the costs of its historical ecological liability, without taking into consideration their (presumably unequal) share in its (past) causation. In this way, the citizenry of the central states would ultimately have to answer for the unfair enrichment of their countries, without having necessarily benefitted from it. Accordingly, the question here is whether it is the states, and not companies for instance, who ought to be the debtors in such a case (Paredis *et al.* 2004: 59-60). On the other hand, there are equally relevant issues with regard to the definition of the creditors. Accepting that there is (and has been) an unequal exchange of resources between the centre and the periphery of the capitalist world-system does not mean accepting that unequal exchange has occurred between states beyond a formal or statistical point of view.<sup>7</sup>

This is important because any possible compensation for the ecological debt paid to states in the periphery does not necessarily imply a real compensation to those affected by the unequal exchange. As a matter of fact, rather than democratic systems that may eventually be able to warrant a fair sharing of the

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<sup>5</sup> Cf. overview in Martínez-Alier (2003).

<sup>6</sup> Moreover, the difficulty of converting material flow into money is obvious, although the reality of measuring ecological debt in monetary terms has been highlighted, as a way to make it understandable for audiences from the centre of the world economy (Martínez-Alier 2003: 47ff).

<sup>7</sup> In this regard, the creditor may be the planet itself (Acción Ecológica 1999).

capital obtained from the cancellation of the ecological debt, many peripheral countries function more or less as structures of domination that are complicit with the ecological impoverishment of their respective territories (Jaria i Manzano 2012: 309-310b). This does not exactly make them ideal candidates for receiving compensation for the ecological debt. Again the mirroring in financial debt as a state-to-state relationship is inadequate in developing the idea of ecological debt as a measure of injustice and compensation for unjust enrichment.

Moreover, without an effective materialisation of a systemic change in global governance, the cancellation of historical ecological debt *per se* would not ensure that patterns of unequal exchange are not perpetuated in the future. This is a critical issue over time, as ecological debt —unlike financial debt— is based on the consumption of non-renewable resources. Furthermore, if ecological debt is the result of unfair enrichment, it should not be taken into consideration as an ordinary financial instrument for the economies of the centre of the capitalist world-system. This is the third aspect where comparison with financial debt is misleading, however inspiring it might have been as a means of wielding ecological debt as a weapon in social debates on global injustice. Consequently, despite the possibility of designing ecological debt as a quasi-contract resulting from unjust enrichment, it is far more useful as a tool to advance in struggles for social change than in compensatory terms (even though compensation can occasionally be phrased in terms of ecological debt in several concrete cases of environmental injustice).

The previous reflections lead us to three provisional conclusions. First, the cancellation of ecological debt between states does not guarantee the adequate compensation of those harmed by patterns of unequal exchange and excessive exploitation of natural resources (e.g., future generations, including those of central states).<sup>8</sup> Second, the consideration of ecological debt as a legal relationship between states does not allow an adequate definition of responsibilities, to the extent that creditors and debtors determined in this way are not necessarily the subjects who profited or were harmed by the actual cause of the debt. And third, the cancellation of ecological debt in these terms does not ensure the sustainable and equitable use of natural resources in the future. For this reason, social activists defending the alleged 'creditors' of ecological debt usually state that their main goal is to prevent the further growth of the ecological debt, rather than being repaid. Arguably, even if the compensation of historical ecological debt would presumably lead to a decapitalisation of the world-system's centre, reducing its capacity to assimilate resources and export waste, it would not necessarily reduce the system's overall potential to degrade ecosystems without fundamental changes in its rationale. Put differently, it would not automatically halt the continuing increase of global ecological liabilities, linked to the growth of social metabolism.

Admittedly, an international compensation mechanism could be devised with the mandate to receive and administer funds assigned to the payment of the ecological debt, by investing them in a way that would contribute to the compensation of the present creditors, or by placing funds in trust for compensation of future creditors. Nevertheless, such an authority would only seem to be possible in a global constitutional setting that would require overcoming the current patterns of global exchange, as well as the global legal structures currently in place. Even if such a scenario were to materialize, the ecological debt would merely appear as one possible tool among others in the design of a fairer system, rather than as a definitive intra-systemic compensation mechanism. In the end, the idea of ecological debt serves to underline the inequitable and unsustainable consequences of the social metabolism of the capitalist world-system.

The recognition of ecological debt could serve as a moral compensation for people affected. However, the cancellation of the debt in the present will not in itself prevent the generation of more debt in the future. For this reason, the compensation of ecological debt on its own would neither solve the problem of consumption of non-renewable resources, nor avoid a collapse of the system and exhaustion of the means of payment. Nevertheless, ecological debt as measure of environmental injustice, even pointing out the problems that arise regarding its cancellation, can be useful in promoting major changes in global governance, because of the criticism it implies of the status quo. In conclusion, meeting the challenges posed by ecological debt requires a major overhaul of the international legal system (Barnosky *et al.* 2012; Biermann *et al.* 2010;

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<sup>8</sup> As for future generations as ecological debt creditors, see Paredis *et al.* (2004: 58).

Ehrlich *et al.* 2012). Without a deep change in the global conditions of production and consumption, ecologically unequal exchange tends to persist, and ecological debt will be generated perpetually. The fundamental problem here is the deep and historical interconnectedness between ecologically unequal exchange, the capitalist world-system, and the current international order.

### 3. International law, the state and environmental justice

Ecologically unequal exchange generates a scenario of structural environmental injustice. This is a consequence of the operation of the global metabolism of the capitalist world-system.<sup>9</sup> Political and legal structures of international relations are not a separate reality detached from social metabolism, but an integral part of it. In order to end the reproduction of ecological debt it seems necessary to achieve profound changes in the international legal system, based on the role of the nation-state as a central institution. This is grounded on the doctrines of sovereignty and formal equality of all states ever since the Peace of Westphalia in 1648.

In this section we shall focus on how systematic ecologically unequal exchange has been shaped by the international legal order, and is inseparably linked to the process of capitalist accumulation. We start from the assumption that it fundamentally determines the global social metabolism, based on an ecologically unequal exchange and the disproportionate use of common goods. To understand how and why the international legal order underpins such an economic structure, one needs to recall the historical connection between the state and the market. Such a historicist approach, in turn, explains the role that law, as a cultural construct, has had in organising the social metabolism and legitimating the power structures that determine it (Häberle 2001; Twining 2009). The state, so to speak, is the institutional apparatus, which allows and furthers the accumulation of capital through the enactment and enforcement of a homogeneous set of rules that govern and protect commercial activity within an emerging domestic market (Jaria i Manzano 2011: 92ff).

Technological capacities and geopolitical settings also explain why the state appears not only as the appropriate framework to govern the national market, but even to expand it through the establishment of colonial empires that provide larger spaces for capital accumulation, while upholding an institutional and legal infrastructure for unequal exchange with non-European peoples and territories (Hobson 2011). The 'decolonisation' process begun after World War II, however, implies a major shift in the role that the state exerts in relation to global markets. The European states that until then had provided the social basis for the nation-state system are gradually losing their respective functions as hosts of capital accumulation.

Markets detach themselves from the state and grow global, projecting themselves as a world-system under the aegis of the United States.<sup>10</sup> This development apparently causes a loss of coordination between the political infrastructure —i.e. the division of global political space into many dozens of nation-states — and the economic structure of the global market. This discrepancy facilitates the development of informal and opaque structures of power, which accelerate capital accumulation based on ecologically unequal exchange. On the other hand, political and economic domination is maintained despite the legal veil of sovereign equality among the states. The Westphalian axiom of formal equality is unable to hide the system's persisting imbalances and inequalities that shape an imperial constellation of states around the centre of the capital accumulation process (Evans 2009: 43).

Hence, the state remains an essential building-block for the network of power in which the global market unfolds (Clarkson and Wood 2009: 222). In other words, the interstate system is the foundation of the economic infrastructure that supports the deployment of global networks, securing the flow of goods, services, and capital. From a legal perspective, the states' institutions warrant the reliability of transactions through regulation and enforcement. In terms of raw power, the threat and use of violence through the police and military forces ensure the maintenance of the global structures of domination, as well as the infrastructures that support the material flows and ecologically unequal exchange.<sup>11</sup> In this vein, some

<sup>9</sup> For a general view on the theory of world-systems, developed from the work of Immanuel Wallerstein, see Martínez-Vela (2001). See the three volumes authored by Wallerstein (1974, 1980, 1989).

<sup>10</sup> For an historical overview of such processes, see Fontana (2011). It is one of the most important historical syntheses of recent decades, although probably little known outside the Spanish-speaking world.

<sup>11</sup> On the dependence on the state of the contemporary phase of the capitalist accumulation system, see Burdeau (1970):

Western states secure space for development under advantageous conditions, thereby occupying the centre and constituting the system's winners (Epiney 2001: 872).

Meanwhile, the remaining states are at the margins of the system, as instrumental structures of domination entrusted with the role of social control in the system's periphery and as safeguards of the flow of resources towards the centre.<sup>12</sup> These global power structures are opaque and devoid of accountability. Under international law, they prevail over democratic decisions taken in the political and legal framework of the nation-state, which ends up adopting a relation of servitude toward them. This assessment does not call into question the state's decisive role in the global power network. It emphasises, however, the state's subservient position, especially with respect to the regulation of transnational trade and investments (Barreda 2005), as well as the access to financial markets (Evans 2009: 46). From a constitutional perspective, it also situates the legitimacy of public authority increasingly far away from the democratic will of the citizenry. This subordination and lack of legitimacy is particularly painful in the periphery, where the terms of access to the global market structures are based on the unequal exchange of resources and the uneven appropriation of global common goods such as the atmosphere and oceans (Conti 1996: 173ff). In fact, the international institutions of economic governance – chiefly, the Bretton Woods institutions (the World Bank and the IMF) and the WTO – have a great share in the responsibility for the situation of financial dependency and resource drain that these states are currently in.<sup>13</sup>

Seen from this perspective, the international legal order can hardly be anything but a legitimizing cover for the global social metabolism based on unequal exchange of resources. In this sense, Anthony Anghie (2004: 3) argues that "colonialism was central to the constitution of international law" and grew "out of the attempt to create a legal system that could account for relations between the European and non-European worlds in the colonial confrontation." Afterwards, postcolonial international law has not changed its bias in securing certain relations of domination, including the unequal appropriation of resources. Against this backdrop, social movements forged the notion of an ecological debt owed by the Global North to the Global South.

It seems that any formula of international law intended to compensate past unequal exchange – which is the main aim with the idea of ecological debt —and to establish a system of fairer exchange demands a critical rethinking of the international legal order. In this regard, when we consider the possible legal enforceability of the notion of ecological debt, beyond the conceptual problems raised in defining it, it is clear that this must entail a profound modification of the system of international relations, as ecologically unequal exchange appears to be inherent to it. Appropriate strategies for the recognition and cancellation of ecological debt do not appear possible to establish in the current system of international relations, as this system tends to generate conditions for the emergence of such debt. Echoing a growing academic debate (Kotzé 2012),<sup>14</sup> we must conclude that a reinterpretation and reconstruction of the existing international legal order in terms of global environmental constitutionalism offers a modest but plausible way to mitigate and correct some deficiencies of the international legal order that perpetuate patterns of global injustice.

#### 4. Trans-civilizational constitutionalism and environmental justice

In previous sections we have argued that global governance structures and governmentality need a fundamental change in order to deal with the global ecological crisis. The ideological matrix that we suggest for such an endeavour draws from constitutionalism, third-worldism and sociological approaches to law that acknowledge its multi- or trans-civilizational (hegemonic and non-hegemonic) dimensions at an equal footing. We argue for the promotion of a global, trans-civilizational consensus on the protection of the ecological integrity of the environment as a common value and concern of humankind. This would also

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185ff).

<sup>12</sup> The idea of *centre-periphery* as a pattern for the operation of the capitalist world-system was developed particularly by Raúl Prebisch, working within the Economic Commission for Latin America (ECLA). See Pérez Caldentey *et al.* 2012.

<sup>13</sup> This structure conditions the internal political dynamics of states, representing real limits to their sovereignty, i.e. a supra-constitution, as defined by Clarkson and Wood (2009: 161ff).

<sup>14</sup> For a more sceptical view, however, see Bodansy (2009).

require undertaking meaningful steps toward the realisation of the old cosmopolitan ideal of a global citizenship, but conceived in terms of a result of intercultural dialogue, articulating contributions to critical legal scholarship coming from two different conceptual environments, i.e. international constitutionalism and third world approaches to international law (TWAIL).

As we have pointed out previously, the phenomenon and conceptualization of ecological debt should be conceived as an expression of the unfair distribution of benefits and burdens within the global social metabolism, including ecologically unequal exchange and the disproportionate occupation and damaging of common goods, such as the atmosphere, measuring historical environmental injustice. This understanding of ecological debt points to the necessity of profound restructuring of the international legal system in order to halt its future reproduction and to negotiate adequate compensation. For this reason, we connect the question of ecological debt with the scholarship aiming toward an overall transformation of international law. This transformation is required for the very reasons highlighted by the concepts of ecological debt, unequal exchange, and global injustice.

The reassessment of the international world-system has to be based on the recognition of inequalities expressed in terms of ecological debt, advancing toward a pluralist constitutionalization of international law, assuming global citizenship defined in intercultural terms. This objective may be pragmatically envisaged through an enhanced human rights approach to international environmental regimes that encompasses not only civil and political rights, but more primarily economic, social, and cultural rights (Langford *et al.* 2013). These rights have to be defined as a result of intercultural dialogue, not as an imposition of hegemonic Western values in order to create an inclusive constitutional framework. Moreover, in this context, rights must be conceived as limited by responsibilities, as means to maintain respectful relations to members of the global community as well as to nature itself, guaranteeing environmental justice and sustainability (Jaria i Manzano 2014: 57ff).

The appropriateness of such an approach, however, is contested from different angles. Different doubts have been expressed about using human rights and global citizenship in this context, which must be taken into account, even when using a modulated formula in defining human rights, as proposed here. Some express "scepticism about the virtues of human rights mainstreaming as a general, abstract project of administrative empowerment", as the implicit ideological load of such an operation and its uncertain outcome may very well dilute the 'revolutionary' within human rights (Koskenniemi 2010: 54-55). In similar terms, others warn about "the potential dangers of depoliticising general justice claims by squeezing them into the framework of law, and, even more narrowly, international law." (Langford *et al.* 2013: 30) From yet another perspective, human rights law is criticized for continuing to be linked to its liberal, Lockean roots, which do not acknowledge or respond to the multi-civilisational reality of global society (Rajagopal 2003: 247-248). For all these reasons, we must underline the necessity of recognizing, in an intercultural definition of human rights, the emphasis on responsibilities in relation to other individuals, human communities, and nature itself.

As Alan Boyle (2012: 628-629) acknowledges, the relationship between human rights and the environment is far from being straightforward and any attempt to formulate a meaningful human right to a decent environment in a treaty needs to address the environment as a global public good, balancing it against the hitherto overarching economic and developmental priorities of existing human rights. Maybe, as he stresses,

...the most important contribution existing human rights law has to offer with regard to environmental protection and sustainable development is the empowerment of individuals and groups affected by environmental problems, and for whom the opportunity to participate in decisions is the most useful and direct means of influencing the balance of environmental, social and economic interests (Boyle 2012: 625).

This points to the potential of rights-based procedures to allow control of power over allocation decisions and environmental injustices, but also the limits of using rights in a traditional way. For this reason,

global citizenship is something to be built not only because we lack it, but also because it ought to be the result of inclusive processes of dialogue, bringing in alternative perspectives to mainstream understandings of human rights, flawed by its dependency on the Lockean heritage.

In view of the scarcity and vulnerability of natural resources, the notion of *global citizenship* ought to be shaped around the equitable access to the benefits of social metabolism and the fair distribution of ecological burdens.<sup>15</sup> From the perspective of moral and political philosophy, for instance, Simon Caney considers that a human rights approach to global environmental regimes, such as the climate change regime, would offer a much-needed theoretical counter-balance to cost-benefit and security-based analyses that presently underpin mitigation and adaptation policies (Caney 2010). Climate change could be an appropriate issue on which to test the potential and limits of human rights perspectives in order to establish a global citizenship which improves the allocation of goods and harms produced by the global social metabolism.

In this sense, integrating a human rights perspective into the climate change regime would imply a fundamental reassessment of the costs involved in mitigation and adaptation, by admitting in the first place that some of them are incommensurable. It would also imply recognising that climate change itself, as well as the mitigation and adaptation measures adopted in response, do have consequences for the enjoyment of human rights that should not and will not be accepted below a given level. Translating these theoretical reflections into the legal domain, the integration of human rights into the climate change regime would not only broaden the basis for states' mitigation and adaptation duties, it would also provide one for duties of compensation should they fail to take all the necessary measures (Caney 2010: 86).

This would indicate that human rights considerations guide not only the evaluation of the impact of climate change, but also the distribution of the duties to uphold the human rights threatened by climate change, thereby substantially broadening the moral and legal basis for claims of distributive, procedural, and corrective justice to be addressed (Caney 2010: 86). From this perspective, economic, social, and cultural human rights would provide valuable hermeneutical tools for re-interpreting some of the key principles on which the climate change regime and other international regimes are based. In sum, human rights — particularly economic, social and cultural rights— and environmental justice ought to be integral parts of the constitutionalisation of international law, but must also be placed in a wider framework defined by responsibility and sustainability (Jaria i Manzano 2012a: 20ff).

Environmental justice can be conceived here as a balance between the equitable access to natural resources and environmental services provided by ecosystems, on the one hand, and the fair distribution of the burdens deriving from their use, on the other hand (Schlosberg 2007: 238). Against this background, the notion of ecological debt might channel compensation claims for historical environmental injustices, both in territorial terms – through the unequal exchange of resources between the periphery and the centre of the world economy – and in temporal terms – through the abuse of available resources to the detriment of future generations. Such a proposal would obviously imply a fundamental alteration of the compromise between the North and the South with respect to the values currently underpinning international environmental law and the global allocation of burden-sharing for environmental protection. At present this status quo is enshrined, as Lavanja Rajamani (2006: 71-88) describes it, in the dichotomy between the culpability/entitlement versus the consideration/capacities premises that underlie Principle 7 of the 1992 Rio Declaration. But this is precisely what we are advocating. Moreover, it is even more relevant here to take into account not only the Rio Declaration, but also the Earth Charter.

We judge an inclusive, deliberative, and open-ended political process to be suitable from a constitutionalist perspective. Ultimately, the assessment of the debt through such a process ought to serve the purpose of legitimately identifying those members or groups of the global community that should bear the financial burden of the public policies necessary to redress the balance. In this way, ecological debt could be useful to allocate responsibilities toward fostering a more legitimate and equitable *status quo*, based on principles of responsibility (Ronellenfisch 1995: 27) and common but differentiated responsibilities (Stone 2004). The precautionary principle (Benidickson 1997: 18ff; Koechlin 1989: 10ff) should also play a crucial

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<sup>15</sup> In similar terms, see also Markus (2014).

role, setting limits for the use of natural resources and preventing new environmental, inter- and intra-generational injustices and further generation of ecological debt. Here the idea of responsibility should be applied to redefine the culture of rights regarding environmental justice, limitations, and the vulnerability of natural resources (Rolston III 1993).

At this point, it is important to underline the importance of intercultural dialogue in order to set up the constitutional framework of a fairer system of global governance, focusing on an equitable system of social reproduction and defining an inclusive set of human rights, not culturally biased (Mora 2005: 291). Non-hegemonic cultures and their implicit concerns with justice and pluralism have to be taken into account in the formulation of global governance strategies, as they may offer appropriate approaches to redressing the current predatory relationship between modern society and nature. This implies overcoming the Westphalian system of international relations, based on states, allowing indigenous peoples, NGOs, local governments, and other actors to participate in the processes of global governance.

The determination of the foundations of global governance starting from an environmental justice model should take into account not only states, but also the numerous political and economic actors of the global social metabolism, in order to overcome the deadlock that traditional diplomacy faces when trying to regulate this metabolism, as the Rio+20 Conference proved. In this context, non-hegemonic cultures and indigenous peoples in particular could make valuable contributions to the redirection of global social metabolism towards sustainable, respectful, and equitable parameters (Glenn 2010: 73). Consequently, a post-Westphalian system of global governance should be designed in which different cultural communities would articulate various regulatory spaces as a bid for intercultural dialogue (Jaria i Manzano 2012c).

## 5. A tentative conclusion

There is much evidence that the current system of global governance contributes to the generation of ecologically unequal exchange, unjust forms of resource allocation, and an unbalanced implementation of human rights. Ecological debt is a concept which acknowledges such imbalances and suggests certain forms of compensation, but, above all, proposes a deep transformation towards a fairer system of global governance and governmentality. We argue that this kind of transformation implies the constitutionalisation of international law and take seriously the arguments of TWAIL that an inclusive global governance must be sensitive to pluralism and neither chauvinistic toward the West nor culturally biased in some other way.

We assume that overcoming current structures of unequal exchange, unfair appropriation of resources, and shortcomings in human rights enforcement can only be achieved through a profound change in the global institutional system of social metabolism and especially international law. The Westphalian model of international relations is not compatible with a sustainable and fair system of social reproduction, and therefore has to be deeply modified in the way proposed in the previous pages. Obviously, further scholarship on alternatives is required, as well as a wide dialogue with social movements and non-western cultures, but it seems that a comprehensive and fundamental transformation of current social metabolism is necessary in order to address its inequalities in allocation and other shortcomings.

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