

Sovereignty, Sustainability and Natural Resources: The Limits of the Law

Sam Adelman¹

This paper analyses deforestation as a problem of international governance and its relationship to climate change. Deforestation leads to biodiversity loss, undermines the rights of indigenous peoples, illegal logging and facilitates the growth of biofuels but above all it is a problem because it depletes their ability to function as carbon sinks and increases greenhouse gas (GHG) emissions. In May, 2013 the concentration of carbon dioxide in the atmosphere exceeded the milestone level of 400 parts per million (ppm).² When the Industrial Revolution began CO₂ levels were 280 ppm. Climate scientists calculate that 350 ppm is the upper limit for carbon dioxide emissions if the average increase in global temperature increase is not to exceed 2 degrees.³ The fifth IPCC report due to be published this month is expected to reiterate that anthropogenic climate change is accelerating, temperatures are rising, oceans are heating, waters are rising, ice is melting, the oceans are acidifying, heat is even moving to the deepest parts of the oceans, and ice shelves are collapsing with unanticipated and frightening speed.⁴ In short, current rates of forest exploitation are literally unsustainable, and this highlights the failure of carbon markets, political will and international environmental and climate law.⁵

¹ School of Law, University of Warwick. Email: s.adelman@warwick.ac.uk. This is a draft. Please do not cite without permission.

² 'Global carbon dioxide in atmosphere passes milestone level', *The Guardian* 10 May 2013: <http://www.theguardian.com/environment/2013/may/10/carbon-dioxide-highest-level-greenhouse-gas> (accessed 20 August 2013).

³ Bill McKibben 'The Tipping Point': http://e360.yale.edu/feature/the_tipping_point/2012/ (accessed 18 August 2013); Hansen, J. Sato, M. Kharecha, P. Beerling, D. Berner, R. Masson-Delmotte, V. Pagani, M. Raymo, M. Royer, D. L. Zachos, J. C. (2008). 'Target atmospheric CO₂: Where should humanity aim?' *Open Atmosphere Science Journal* 2, 217-231.

⁴ 'With the forthcoming IPCC report, the contrarians finally agree we are changing the climate', *The Guardian* 19 August 2013: <http://www.theguardian.com/environment/climate-consensus-97-per-cent/2013/aug/19/global-waring-ipcc-ar5-report> (accessed 19 August 2013).

⁵ Carbon markets have conspicuously failed to limit greenhouse gas emissions despite cap-and-trade being the centrepiece of the Kyoto Protocol. The largest carbon market, the EU Trading Scheme, has consistently failed to price carbon at the levels required to stimulate research, development and investment in renewable energy. See for example Frédéric Branger, Oskar Lecuyer and Philippe Quirion (2013) *The European Union Emissions Trading System: should we throw the flagship out with the bathwater?* Nogent sur Marne: CIRED, available at <http://www.centre-cired.fr/IMG/pdf/CIREDWP-201348.pdf> (accessed 20 August 2013). Nicholas Stern argues that two-thirds of fossil fuels will have to remain underground if the world is to meet existing internationally agreed targets to avoid dangerous climate change. If the agreements hold, these reserves will be in effect unburnable and so worthless – leading to massive market losses. But stock markets are betting on countries' inaction on climate change. See Carbon Tracker

My argument unfolds in two parts. In the first I examine the contemporary international legal framework on deforestation, focusing on REDD (Reducing Emissions from Deforestation and Forest Degradation) mechanism under the UN Framework Convention on Climate Change (UNFCCC) and other relevant environmental law principles. I argue that existing legal regimes are limited, contradictory and contain much unenforceable ‘soft’ law.⁶ There is a clear mismatch between environmental and climate science and the structures and institutions of international environmental governance. Most international environmental regimes are predicated upon the assumption that environmental changes are linear and gradual and do not deal easily with complex risks and strong uncertainty. The precautionary principle, which stipulates that we should err on the side of caution where scientific evidence is inconclusive, is widely embraced but regularly disregarded.⁷ Environmental governance regimes are slow to gestate and generally lead to agreements around the lowest common denominators. The second part comprises a discussion of alternative conceptions of governance, ranging from the idea of the New Global Commons, making ecocide a crime against peace, and the foregrounding of indigenous knowledges in agreements like the Universal Declaration on the Rights of Mother Earth.

Forests cover about 4 billion hectares or roughly a third of the earth’s land surface and are home to as much as 90 per cent of land-based animal and plant life. They directly provide food, shelter, fuel and a source of income to the 1.6 billion people and they benefit the global environment by regulating climate and water cycles and preventing soil erosion. Population growth and the growing demand for food, fibre and fuel (not least biofuels) have intensified deforestation ‘and the average annual net loss of forest has reached about 5.2 million hectares in the past ten years.’ There was a net loss of 88 million hectares of forest (9 per cent of the total forest area) in Latin

& The Grantham Research Institute, LSE (2013) *Unburnable Carbon 2013: Wasted capital and stranded assets*. The Stern Review described climate change as ‘the greatest and widest-ranging market failure ever seen’ Nicholas Stern (2006) *Stern Review on the Economic of Climate Change* Cambridge: Cambridge University Press, i. From the rapidly expanding literature on the incompatibility of unending economic growth and protecting the environment. See for example P. A. Victor (2008) *Managing Without Growth: Smaller By Design, Not Disaster* Cheltenham: Edgar Elgar; Tim Jackson (2009) *Prosperity Without Growth: Economics for a Finite Planet* London: Earthscan; Herman E. Daly (1996) *Beyond Growth The Economics of Sustainable Development* Boston: Beacon Press; and Herman E. Daly (2011) ‘From a failed growth economy to a steady-state economy’ *The road to Rio+20* New York and Geneva: UNCTAD, available at www.uncsd2012.org/rio20/index.php?page=view&type=400&nr=11&menu=45 (accessed 2 August 2013).

⁶ States appear to have opted for soft law characterised by guiding principles rather than binding legal commitments on deforestation, in contrast to the Convention on Biodiversity and the UNFCCC – neither of which have been successful; they are binding but apparently unenforceable.

⁷ See Catriona McKinnon (2012) *Climate Change and Future Justice* Abingdon: Routledge, 51ff.

America between 1990 and 2010. In Africa the corresponding figures were 75 million hectares and 10 per cent. The store of carbon is estimated to be about 652 gigatonnes, 289 in biomass alone, making them crucial component of any attempt to mitigate climate change.⁸ Deforestation accounts for approximately 17 per cent of total annual GHG emissions⁹ – more than all forms of transport combined or the emissions of China or the United States.¹⁰ At the same time, trees absorb about a quarter of anthropogenic emissions. When emissions from deforestation are included, Brazil and Indonesia are amongst the top five global emitters of GHGs.¹¹

Poverty, insecure land tenure and inadequate legal protection of the rights of forest dwellers and viable governance structures at all levels are amongst the main drivers of deforestation.¹² As Philippe Sands argues, ‘The problem of the destruction of tropical rainforests is probably the most dramatic and best known example of a national resource itself becoming an international problem.’¹³ Halting deforestation is a precondition for dealing with climate change but will prove insufficient if the exploitation of fossil fuels continues unabated. William Boyd argues there is a ‘growing realization that climate policy may represent the last chance to save tropical forests on any significant scale.’¹⁴

Sovereignty is both a precondition for effective environmental governance because states are the main subjects of international law, but it is also the rock on which such governance repeatedly founders. Under international law, formally equal states are bound only by obligations they have voluntarily accepted, primarily in the form of treaties. Interference in the internal affairs of states is impermissible but globalisation makes it increasingly difficult to determine what falls within

⁸ FAO (2010) *Global Forest Resources Assessment 2010*. FAO Forestry Paper No. 163. Rome: Food and Agriculture Organization of the United Nations available at www.fao.org/docrep/013/i1757e/i1757e00.htm (accessed 2 August 2013). See also FAO (2012) *State of the World's Forests 2012* Rome: Food and Agriculture Organization of the United Nations.

⁹ IPCC (2007) *Climate Change 2007, Synthesis Report (AR 4)* Geneva: IPCC, 2007, 36.

¹⁰ Johan Eliasch (2008) *The Eliasch Review*. Surrey: Crown Copyright, 2. Other estimates put the figure closer to 20 per cent, see *The Guardian*: <http://www.theguardian.com/environment/2009/sep/24/redd-reducing-emissions-from-deforestation> (accessed 23 August 2013). Eliasch Review (p. 28) estimates that costs of climate change from deforestation could reach US\$1 trillion a year by 2100.

¹¹ http://wwf.panda.org/about_our_earth/aboutcc/climate_solutions/what_must_be_agreed/forests/ (accessed 2 September 2013). Brazil has committed to reducing deforestation in the Amazon by 70 per cent by 2020.

¹² IFF (2000) *Report of the Intergovernmental Forum on Forests on its Fourth Session (E/CN.17/2000/14)* New York: United Nations: www.un.org/esa/forests/documents-iff.html (accessed 2 August 2013).

¹³ Philippe Sands (2003) *Principles of International Environmental Law* (2nd Ed) Cambridge: Cambridge University Press, xiv.

¹⁴ William Boyd (2010) ‘Climate change, fragmentation, and the challenges of global environmental law: elements of a post-Copenhagen assemblage’ *University of Pennsylvania Journal of International Law* 32.2, 845.

exclusive jurisdiction and what does not. Global legal pluralism is manifested in the existence of multiple and often overlapping regulatory regimes administered by state and non-state actors.¹⁵ As we shall see, the sovereignty of states over natural resources under their jurisdiction in principle enables them to exploit resources like forests and fossil fuels as they see fit.¹⁶ The paradox to which this gives rise is epitomised in the Preamble to the UNFCCC:

Recalling also that States have, in accordance with the Charter of the United Nations and the principles of international law, the sovereign right to exploit their own resources pursuant to their own environmental and developmental policies, and the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States or of areas beyond the limits of national jurisdiction,

Reaffirming the principle of sovereignty of States in international cooperation to address climate change.

To date, the sovereign prerogative to pursue unimpeded economic growth has almost always come before the duty not to cause harm to other states.

REDD/REDD+

Until the relatively recent emergence of the REDD framework, deforestation and climate change were addressed under different legal regimes, none of which has adequately addressed the problem.¹⁷ The 2007 Bali Road Map adopted at COP 13 reflected the realisation that these problems are mutually reinforcing and led to concerted attempts to deal with deforestation primarily as a

¹⁵ See for example Paul Schiff Berman (2012) *Global Legal Pluralism: A Jurisprudence of Law Beyond Borders* Cambridge: Cambridge University Press.

¹⁶ Subject to the balancing of this right against other principles of international environmental law such as the no harm principle, the precautionary principle, and common but differentiated responsibility. It is not clear whether there is a hierarchy of principles and, if so, which takes precedence.

¹⁷ The Clean Development Mechanism in the Kyoto Protocol covers afforestation and reforestation but not deforestation; indeed, the Protocol expressly excludes deforestation. References to the land use, land-use change, and forestry sector (LULUCF) were introduced into the negotiations in a late and haphazard fashion. See UN Framework Convention on Climate Change, *Decision 11/CP.7: Land Use, Land-Use Change, and Forestry*, U.N. Doc. FCCC/CP/2001/113/Add.1, 60 (Jan. 21, 2002). On the myriad ineffective attempts to address deforestation, see William Boyd (2010) 'Ways of Seeing in Environmental Law: How Deforestation Became an Object of Climate Change'. 37 *Ecology Law Quarterly* (2010) and Beatriz Garcia (2011) *The Amazon from an International Law Perspective* Cambridge: Cambridge University Press. Climate change is covered by the United Nations Framework Convention on Climate Change (United Nations Framework Convention on Climate Change 1992, UN Doc. FCCC/INFORMAL/84 GE.05-62220 (E) 200705) and the Kyoto Protocol (UN Doc FCCC/CP/1997/7/Add.1, Dec. 10, 1997; 37 ILM 22 (1998)).

problem of climate governance through the REDD process.¹⁸ REDD is designed to create incentives for developing countries to protect and manage their forests in ways that reduce their GHG emissions. The aim is to make it more valuable to keep forests instead of cutting them down by placing a financial value on the carbon stored in trees. On this basis, developed countries are able to offset their emissions by compensating developing countries for not exploiting the forests. One of the main issues of contention in negotiations on a successor to the Kyoto Protocol is which states are obliged to provide funding for adaptation and mitigation and how these funds will be disbursed. Developed countries pledged US\$30 billion in ‘fast track’ mitigation funding between 2010 and 2012 and US\$100 billion annually by 2020 to be managed in a Green Fund administered by the World Bank. A large proportion is expected to be devoted to REDD+ projects. Norway has committed US\$3 billion to REDD+.¹⁹

REDD was explicitly included in a 2009 resolution under the UNFCCC at COP 15 in Copenhagen and COP16 at Cancun called on states to reduce emissions from deforestation and forest degradation, conserve and enhance forest carbon stocks and manage forests sustainably under what is now known as the REDD+ mechanism.²⁰ To this end, the plus element of REDD+ goes beyond reducing deforestation and forest degradation to include conservation, sustainable management of forests, reforestation and sequestering GHGs. Unsurprisingly, it is compatible with the idea of a ‘green economy in the context of sustainable development and poverty reduction’ enunciated at the Rio+20 conference in 2012.²¹

REDD+ is the outcome of agreements between sovereign states with the seemingly paradoxical aim of circumscribing the sovereignty of developing countries with jurisdiction over large for-

¹⁸ This has effectively resulted in a shift of emphasis from protecting forests as carbon sinks to preventing deforestation in order to limit greenhouse gas emissions.

¹⁹ Takacs, note 22, 655.

²⁰ On REDD+ and the UNFCCC, see Rosemary Lyster ‘International legal frameworks for REDD+: Ensuring Legitimacy’ in Rosemary Lyster, Catherine MacKenzie and Constance McDermott (eds) (2013) *Law, Tropical Forests and Carbon* Cambridge: Cambridge University Press.

²¹ ‘The Future We Want’, General Assembly Resolution A/RES/66/288 adopted 27 July 2012, available at <http://daccess-dds-ny.un.org/doc/UNDOC/GEN/N11/476/10/PDF/N1147610.pdf?OpenElement> (accessed 9 September 2013). The document is noticeably light on legally binding commitment and is typified by the predilection to make vague calls such as ‘enhanced efforts to achieve the sustainable management of forests, reforestation, restoration and afforestation, and we support all efforts that effectively slow, halt and reverse deforestation and forest degradation, including promoting trade in legally harvested forest products’ (p. 53). See also Charlene Watson, Emily Brickell and Will McFarland (2013) *Integrating REDD+ into a green economy transition: Opportunities and challenges* London: Overseas Development Institute.

ests. As Takacs, note 22 observes, ‘Once intact forests are deemed essential to mitigating GHG buildup, they inch closer to an international resource that states no longer control’.²² Consistent with green economy mentality, REDD+ seeks to turn them in fungible, tradable carbon storage devices providing an environmental service to humanity. Monitoring, reporting and verification (MRV) are an essential precondition for REDD to work. Takacs, note 22 regards debates about them as ‘debates over sovereignty, whether or not they’re framed in those terms. They are debates between Northern nations with traditional hegemonic power imposing conditions on nations with less power, and those nations in turn resisting and making counter demands, based on their growing clout as guardians of the world’s increasingly valuable forests.’²³ He argues that we need to construct a new, non-exclusive form of sovereignty that reflects the trans-border nature of climate change and deforestation – but sovereignty has never operated in this manner.²⁴ MRV conditionalities are a paradoxical manifestation of sovereignty, which is exercised in order to circumscribe the principle of permanent sovereignty over natural resources.

Potential problems in implementing REDD+ include corruption due to land grabbing and insecure tenure rights, fraud in monitoring, evaluation and reporting, elite capture of REDD+ revenues, and leakage.²⁵ Its emergence from the UNFCCC leads to the possibility that it will replicate failings of sovereign-centric international environmental law. Because it will ‘most probably will be implemented at national scale and must comply with internationally determined mitigation obligations, these efforts run the risk of reinforcing classic centralized administration rather

²² David Takacs, note 22 (2013) ‘Forest Carbon (REDD+), Repairing International Trust, and Reciprocal Contractual Sovereignty’ 37 *Vermont Law Review* 653, 704.

²³ Takacs, note 22, 700. He prefers the acronym MMRV because it includes measuring.

²⁴ Proponents of cosmopolitanism argue that human rights constitute an alternative foundational principle that limits sovereignty on which international law should be based. I have written elsewhere about the reasons why sovereignty is the rock on which cosmopolitanism founders (Sam Adelman (2011) ‘Cosmopolitan Sovereignty’ in Cecilia Baillet, and Katja Franko Aas (eds) *Cosmopolitanism Justice and its Discontents* Abingdon: Routledge).

²⁵ Corruption and REDD+: Identifying risks amid complexity U4 Brief May 2012:2: <http://www.cmi.no/publications/file/4455-corruption-and-redd.pdf> (accessed 31 August 2013). From the growing literature on land grabbing, see Matias E. Margulis, Nora McKeon, and Saturnino M. Borras Jr. ‘Land grabbing and global governance: critical perspectives’ *Globalizations* 10.1 (2013): 1-23 and Lorenzo Cotula (2013) *The Great African Land Grab? Agricultural Investments and the Global Food System* London: Zed Books. Leakage results from REDD+ projects that merely shift emissions rather than reducing them. See FERN, Greenpeace International, Rainforest Foundation UK and Friends of the Earth US (2012) ‘REDD+ and carbon markets: ten myths exploded’ (http://libcloud.s3.amazonaws.com/93/02/7/835/Report_REDD_and_Carbon_Markets_10_myths_exploded_June_2011.pdf (accessed 30 August 2013)).

than fostering innovative local governance schemes.²⁶ REDD+ fits easily into neoliberal approaches to development is thus likely to replicate the flaws of hierarchical, formal and state-centred approaches to deforestation instead of facilitating innovative, decentralised and localised forms of governance.

Combining conventional international law making with market mechanisms, REDD+ is an innovative but as yet unproven framework designed to address deforestation through a mixture of carrots and sticks. It is too soon to draw conclusions about the effectiveness of the mechanism, but if it successful it will benefit forest dwellers and indigenous peoples, and slow biodiversity loss in addition to reducing emissions. If it works it will signify a willingness to substitute sovereign prerogative and (often wrongly) perceived national self-interest with multilateral international co-operation.

REDD was preceded by a myriad failed attempts to deal with deforestation in relation to biodiversity loss, for example.²⁷ Boyd asserts that ‘the push since the early 1990s to fashion a comprehensive international legal instrument on forests has been a spectacular failure, foundering on the fundamental conflict between the conception of tropical forests as the “common heritage of mankind” and forests as sovereign national resources, as well as the perennial inadequacy of donor country financing’. The upshot has been that ‘the various efforts of the past several decades to construct a workable global forest governance regime have been marked by repeated failures and false starts, with few notable success stories.’²⁸ Boyd is sceptical that framing deforestation as a climate problem will succeed where previous approaches have failed because

deforestation is not a unitary phenomenon amenable to easy generalization, much less global governance. Previous ways of seeing the problem, in other words, have not provided a sufficient foundation for effective governance, raising the important question of

²⁶ Benno Pokorny, Imme Scholz, and Wil de Jong (2013) ‘REDD+ for the poor or the poor for REDD+? About the limitations of environmental policies in the Amazon and the potential of achieving environmental goals through pro-poor policies’ *Ecology and Society* 18(2): 3, 10.

²⁷ See David Humphreys (2005) ‘The Elusive Quest for a Global Forests Convention’ *Review of European Community & International Environmental Law* Vol. 14 Issue 1, 1-10.

²⁸ Boyd, note 14, 865.

whether a climate policy approach to deforestation (a very different way of seeing the problem) will succeed where past efforts have failed.²⁹

Sovereignty may be the wrong framework in which to address deforestation because of the range of non-state actors with control over forests, both those whose impulse is primarily to protect them (indigenous peoples) and those seeking to profit from them (transnational corporations). Insisting on formal sovereignty merely indicates the depth and scope of the theoretical problem. He argues that ‘bringing forest into an international climate regime will increase the pressure for a de facto internationalisation of tropical forests given their role in the global carbon cycle and their importance to climate protection efforts.’³⁰

1. The Contemporary Framework of International Environmental Law Governance

Sands identifies seven broadly supported principles of international environmental law: sovereignty over natural resources accompanied by the responsibility not to cause transboundary environmental damage; preventive action; the principle of co-operation; sustainable development; the precautionary principle; the polluter-pays principle; and common but differentiated responsibility. He notes that ‘In the absence of judicial authority and in view of the conflicting interpretations under state practice, it is frequently difficult to establish the parameters or the precise international legal status of each general principle or rule.’³¹

Consistent with international law in general, sovereignty is the cardinal principle of international environmental law and states are bound almost exclusively by agreements that have acceded to, primarily in the form of treaties.³² The development of international environmental law has been characterised by the emergence of numerous principles whose status is unclear and often appear

²⁹ *Ibid.*, 866.

³⁰ Boyd, note 14, 880, footnote 144.

³¹ Sands, note 13, 231.

³² See, for example, the UNESCO World Heritage Convention, Article 6; the 1992 Biodiversity Convention, Article 15; the Stockholm Declaration, Principle 21; the Rio Declaration, Principle 2. Clause 58(b) of the Rio+20 final document promotes green economy policies in the context of sustainable development and poverty eradication that ‘Respect each country’s national sovereignty over their natural resources taking into account its national circumstances, objectives, responsibilities, priorities and policy space with regard to the three dimensions of sustainable development,’ Report of the United Nations Conference on Sustainable Development, Rio de Janeiro, 20-22 June 2012, UN Doc. A/CONF.216/16. The UNFCCC insists that state sovereignty must be respected; see UNFCCC Decision 2/CP.17. For a discussion, see Duncan A. French (2001) *A Reappraisal of Sovereignty in the Light of Global Environmental Concerns*, 21 *Legal Studies* 376 at 377. Customary international law has played a secondary role in the development in the development of international environmental law; see Sands, note 13, 143-44.

to conflict with each other and a profusion of soft law in the form of agreements and conventions that are more exhortatory than enforceable. Attempts to negotiate a successor to the 1997 Kyoto Protocol have repeatedly foundered on the rock of state sovereignty, effectively enabling recalcitrant emitters like China and the United States to veto what they regard as interference in their internal affairs and thereby frustrate progress towards solving an intrinsically transboundary problem that requires multilateral co-operation.³³ We are thus confronted with one principle, permanent sovereignty over natural resources, which conflicts with and regularly trumps others that offer potential solutions to deforestation, namely common but differentiated responsibility and common heritage of human kind. Unlike the oceans and the atmosphere, forests are not regarded as global commons or the common heritage of humankind and their exploitation is consequently a matter of sovereign prerogative.³⁴ We are rapidly reaching the point at which the contradiction between sovereignty and sustainability cannot be contained. Paradoxically however, the structure of international environmental law dictates the centrality of sovereignty in any solutions to deforestation and climate change.

1.1 Permanent Sovereignty Over Natural Resources

Sovereignty has been the fundamental organising principle of the international system since the Peace of Westphalia in 1648, but the permanent sovereignty over natural resources originated in the 1950s as an offshoot of the right to self-determination due to the insistence of newly independent developing countries concerned that foreign transnational corporations were the main beneficiaries of the natural resources they viewed as sovereign national patrimony.³⁵ In 1966, the UN General Assembly reaffirms ‘the inalienable right of all countries to exercise permanent sovereignty over their natural resources in the interest of their national development’ and the princi-

³³ At COP 17 in Durban in 2011 it was agreed that a new agreement should be reached by 2015 and come into force by 2020 – by which it may well be too late to avoid irreversible warming, depending on the targets negotiated.

³⁴ Following Weston and Bollier’s usage, the Commons refers to ‘a distinct paradigm of ecological resource governance and management (as when commoners manage one or more ecosystems or natural resources directly themselves) or governance according to commons principles (as when commoners delegate their managerial authority conditionally)’: Burns H. Weston and David Bollier (2013) *Green Governance: Ecological Survival, Human Rights, and the Law of the Commons* Cambridge: Cambridge University Press, 123.

³⁵ Kamal Hossain and Subrata Roy Chowdhury (eds.) (1984) *Permanent Sovereignty Over Natural Resources in International Law* London: Frances Pinter. On the history of the principle, see Nico Schrijver (1997) *Sovereignty over Natural Resources: Balancing Rights and Duties* Cambridge: Cambridge University Press. On the legal status of the principle, see Sands, note 13, 235ff.

ple has subsequently been reaffirmed in numerous agreements, declarations and resolutions.³⁶ Principle 21 of the 1972 Stockholm Declaration, which provides that:

States have, in accordance with the Charter of the United Nations and the principles of international law, the sovereign right to exploit their own resources pursuant to their own environmental policies, and the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States or of areas beyond the limits of national jurisdiction.³⁷

Sands views Principle 21 (as slightly modified by Principle 2 of the Rio Earth Summit Declaration) of the Stockholm Declaration as ‘the cornerstone of international environmental law.’³⁸ He argues that these principles subject states to environmental limits when exercising their sovereignty by imposing an obligation accepted by all states not to cause transboundary environmental damage and that the two principles comprise customary international law following the ICJ Advisory Opinion on *The Legality of the Threat or Use of Nuclear Weapons*.³⁹ In his dissenting opinion, Justice Weeramantry argued that:

The doctrine that the sovereign is free to do whatever statute does not expressly prohibit is a long-exploded doctrine. Such extreme positivism in legal doctrine has led humanity to some of its worst excesses. History has demonstrated that power, unrestrained by princi-

³⁶ G.A. Res. 2158 (XXI), U.N. GAOR, Twenty-First Session (1966). The resolution was one of several adopted from 1952 onwards with the aim of establishing a New International Economic Order (NIEO): See UNGA Res. 523 (VI) (1950); Res. 626 (VII) (1952); Res. 837 (IX) (1954); Res. 1314 (XIII) (1958); Res. 1515 (XV) (1960). See also G.A. Res. 1803 (XVII) (1962) (stating that states have the right to permanent sovereignty over their natural resources and wealth for the benefit of their national development and people); G.A. Res. 2158 (XXI) (1966) (reaffirming “the inalienable right of all countries to exercise permanent sovereignty over their natural resources”); and UNGA Res. 2849 (XXVI) (1971), which declares that ‘each country has the right to formulate, in accordance with its own particular situation and in full enjoyment of its national sovereignty, its own national policies on the human environment.’ See also Article 1(2) of the Right to Development, which states ‘The human right to development also implies the full realization of the right of peoples to self-determination, which includes, subject to the relevant provisions of both International Covenants on Human Rights, the exercise of their inalienable right to full sovereignty over all their natural wealth and resources.’ (Declaration on the Right to Development, AJRES/41/128, Annex (December 1986); Convention on Biological Diversity art. 3, June 5, 1992, 1760 U.N.T.S. 79 (entered into force 29 December, 1993). See also the Declaration of the United Nations Conference on the Human Environment, U.N. Doc. A/Conf.48/14/Rev. 1(1973); 11 ILM 1416 (1972), generally referred to as the Stockholm Declaration. Principle 2 of UN Conference on Environment and Development is substantially the same: Report of the UN Conference on Environment and Development (UNCED), Rio de Janeiro, 3–14 June 1992, UN Doc. A/CONF.151/26/Rev.1 (vols. I–III).

³⁷ French, note 32, 381 who argues that that the Stockholm Declaration’s no harm rule is the ‘most fundamental rule of modern international environmental law.’

³⁸ Sands note 13, 236.

³⁹ *Ibid.*, 241. *Legality of the Threat or Use of Nuclear Weapons* (1996) ICJ Reports 226.

ple, becomes power abused. Black-letter formulations have their value, but by no stretch of the imagination can they represent the totality of the law.⁴⁰

Deforestation does not fall within the scope of this prohibition despite abundant scientific evidence of its detrimental effects. These include soil degradation and erosion, destruction of natural habitats and species extinction, changes in climatic conditions (because they help to regulate atmospheric temperatures) and destruction of environmental sinks that absorb carbon dioxide. By recognising the necessity for states to co-operate to protect the environment, Stockholm marked a turning point in international environmental law even as it demonstrated the intrinsic difficulties involved in attempts to reconcile sovereignty and sustainability. States are entitled to exploit the natural resources under their jurisdiction with so long as this does not interfere with the right of other states to do the same, which may imply a principle of fair and equitable resource sharing (as in the 1992 Convention on Biodiversity). Since it is impossible to square this circle in relation to deforestation and GHG emissions because both *ipso facto* damage the environment of other states, the question arises of whether certain natural resources are so fundamental to the future of humanity that they should no longer be subject to the sovereign control of individual states.

1.2 Common Heritage, Common Responsibilities

Two principles of international environmental law ostensibly limit or moderate sovereign discretion: the common heritage of humankind and common but differential responsibilities.⁴¹ Stating the obvious, the Preamble to the UNFCCC acknowledges that ‘change in the Earth’s climate and its adverse effects are a common concern of humankind.’⁴² Baslar argues that this concept applies exclusively to large scale ecological dangers.⁴³ The principle of the common heritage of humankind is predicated on the assumption that it is necessary to move beyond expressions of concern towards binding legal regimes designed to protect aspects of the global environment that

⁴⁰ *Legality of the Threat or Use of Nuclear Weapons, Advisory Opinion*, 1996 I.C.J. 226, 494 (July 8).

⁴¹ The latter developed is based on the application of equity in international law, and recognises the special needs of developing countries in the development, application and interpretation of rules of international environmental law. For example, it permits developing states to focus on the reduction of poverty rather than GHGs and implies that primary responsibility for protecting the biosphere, REDD+ and adaptation to and mitigation of climate change will be weighted towards developed countries. See Sands, note 13, 285-89.

⁴² See also UNGA Res. 43/53 (1988), 44/207 (1989) and 45/212 (1990).

⁴³ Kemal Baslar (1998) *The Concept of the Common Heritage of Mankind in International Law* The Hague: Martinus Nijhoff Publishers, 295.

should not be subject to state sovereignty for a variety of reasons, foremost of which is the imperative to combat global warming. It applies to the Moon, the deep seabed and ostensibly to the Antarctic⁴⁴ but forests do not fall under the ambit of the principle, which does not enjoy universal acceptance and is belied by state practice.⁴⁵ Mgbeoji⁴⁶ argues that it is an ideological tool of convenience. This is not untrue, but we have reached the point at which the irrefragable logic of science demonstrates beyond any reasonable doubt that unrestrained greenhouse gas emissions and deforestation threaten the exercise of sovereignty as it is currently exercised. As Takacs, note 22 argues, ‘Sovereignty over natural resources is not “permanent” - or even temporary - if forests degrade or disappear due to changing ecological conditions.’⁴⁷ As French observes, ‘the unique features of environmental issues and the challenge they pose to the international community mean that international environmental law is actually affecting the very nature of international law itself.’⁴⁸ Tarlock envisages the emergence of an altered international order dictated by environmental imperatives based on a modified conception of sovereignty reflected in:

erga omnes duties to require more sustainable use of national territories such as tropical rainforests and wetland systems. The legal rationale is that the potential adverse global impacts of ecosystem modification may make them part of the common heritage of mankind or a matter of common concern or common interest.⁴⁹

⁴⁴ Not all states have renounced sovereign claims to the Antarctic, Sands, note 13, 712, fn. 7.

⁴⁵ For a case study on the Brazilian Amazon, see Guillermo Pardavé (2011) ‘REDD Alert for developing countries? Are their forests in risk of internationalisation with the recent developments within the UN climate change regime?’ *Agenda Internacional Ano XVIII*, No. 29, 213-246 at 237-38. Forests were not even deemed to be the ‘common concern of mankind’ in the limited Forest Principles adopted at UNCED (Non-legally Binding Authoritative Statement of Principles for a Global Consensus of the Management, Conservation and Sustainable Development of all Types of Forests); see Katharina Kunzmann (2008) ‘The Non-Legally Binding Instrument on Sustainable Management of All Types of Forests-Towards a Legal Regime for Sustainable Forest Management?’ 9 *German Law Journal* 981. Agenda 21, a non-binding policy statement adopted at UNCED, contained a vague call on states to ‘consider the need for and feasibility of all kinds of appropriately internationally agreed arrangements to promote international co-operation’ on forests (para. 11.12(e), U.N. GAOR, 46th Sess., Agenda Item 21, UN Doc A/Conf.151/26 (1992)). On the history of attempts to address deforestation under international environmental law prior to REDD, see Sands note 13, 545-551. See also Boyd, note 14, 863-67.

⁴⁶ Ikechi Mgbeoji (2003) ‘Beyond Rhetoric: State Sovereignty, Common Concern, and the Inapplicability of the Common Heritage Concept to Plant Genetic Resources’ 16 *Leiden Journal of International Law* 826.

⁴⁷ Takacs, note 22, 710.

⁴⁸ Duncan A. French (2001) ‘A Reappraisal of Sovereignty in the Light of Global Environmental Concerns’ 21 *Legal Studies* 376 at 377.

⁴⁹ Dan Tarlock (2007) ‘Ecosystems’ in Daniel Bodansky, Jutta Brunnée and Ellen Hey (eds) *The Oxford Handbook of International Environmental Law* Oxford: Oxford University Press, 587.

Sovereign control over natural resources conflicts with the principle of the common heritage of humankind, leading Schrijver to ask whether the ‘heritage of mankind regime can only start where the permanent sovereignty over natural resources regime ends’?⁵⁰

A second principle limiting sovereignty over natural resources is that of common but differentiated responsibility. Boyd argues that bringing REDD+ within the ambit of the post-Kyoto negotiations ‘important, perhaps crucial, component of any overall political deal on a post-2012 agreement, by breaking the Kyoto logjam over “common but differentiated responsibilities” and providing an avenue for developing countries to move toward meaningful emissions reductions commitments.’⁵¹

1.3 Sustainable Development

Finally, it can be argued that the principle of sustainable development limits sovereign exploitation of natural resources in two ways. First, the principle is undermined when the interests of future generations are undermined by irreversible climate change caused in part by deforestation. Second, the principle is arguably also violated by weak forms of sustainable development that are conflated with economic growth and take precedence over intra-generational justice in the form of poverty alleviation and environmental protection.⁵²

Sustainable development is a vague, contested and deeply flawed concept.⁵³ Deeply influenced by neoliberalism, it promises to ‘nothing less than to square the circle: to identify a type of development that promotes both ecological sustainability and international justice.’⁵⁴ The concept emerged at the 1992 Earth summit in Rio de Janeiro, where it was promoted as the formula for achieving intra-generational justice by eliminating poverty without imposing unfair obligations on future generations (inter-generational justice) in the classic Brundtland Commission formula-

⁵⁰ Schrijver, note 35, 229.

⁵¹ Boyd, note 14, 877.

⁵² On weak and strong forms of sustainable development, see for example Bill Hopwood, Mary Mellor, and Geoff O’Brien (2005) ‘Sustainable development: mapping different approaches’ *Sustainable development* 13.1, 38-52.

⁵³ Sam Adelman (2013) ‘Rio+20: sustainable injustice in a time of crises’ *Journal of Human Rights and the Environment* Vol. 4 No. 1, 6–31.

⁵⁴ Wolfgang Sachs (1999) *Planet Dialectics: Explorations in Environment and Development* London: Zed Books 76.

tion.⁵⁵ Emerging as neoliberalism was entering its prime, sustainable development promised the magical possibility of integrating economic development, social justice and environmental protection while overcoming the physical limits of the biosphere through market solutions on the other. Wolfgang Sachs described the concept as an oxymoron because on the basis that endless economic growth and environmental sustainability are intrinsically contradictory.⁵⁶

1.4 Common Heritage of Humankind

The impact of the principle of the common heritage of humankind has been limited, to say the least. Attention has therefore been focused on other forms of governance designed to overcome failures driven by sovereign self-interest ‘when the solution of enclosure is not available and where, by definition, there is no global government.’⁵⁷ For many economists the issue of the global commons is framed in terms of ‘market failure’ in which resources are inefficiently allocated.⁵⁸

The failure of global environmental governance is demonstrated by the fact that scientists believe that human beings have transgressed three of nine planetary boundaries: biodiversity loss, climate change, and nitrogen cycle.⁵⁹ The first part of this paper has shown that contemporary international law on deforestation and climate change is a jumble of largely ineffectual principles, rules and norms and the history of international attempts to protect the Earth’s rainforests is therefore patchy at best. Humphreys argues that the crisis forest governance is primarily due to transnational corporate power and the feebleness of UN institutions. ‘NGOs and business are producing new rules that are then adopted by public authorities as public standards. In some respects, the state is now a taker, rather than the maker, of standards.’⁶⁰ These regimes ‘are market based, aim at greater efficiency in resource use and are voluntary alternatives to state regulation and intergovernmental regimes.’⁶¹ As Boyd notes, the failure of global forest governance has

⁵⁵ The commission defined it as humanity’s ability to meet ‘the needs of the present without compromising the ability of future generations to meet their own needs,’ World Commission on Environment and Development (1987) *Our Common Future* Oxford: Oxford University Press 8.

⁵⁶ Sachs, note 54.

⁵⁷ See Schrijver, note 35, 221 on the legal status of the principle.

⁵⁸ John Vogler (2012) ‘Global Commons Revisited’ *Global Policy* Vol. 3, Issue 1, 62.

⁵⁹ Rockström *et al.* (2009) ‘Planetary boundaries: exploring the safe operating space for humanity’ *Ecology and Society* 14(2): 32.

⁶⁰ David Humphreys (2006) *Logjam: Deforestation and the Crisis of Global Governance* London: Earthscan, 215.

⁶¹ *Ibid.*, 223.

been ascribed to ‘a variety of factors, including the tremendous variability in the forces driving deforestation, deep-seated conflicts over sovereignty and control of forest resources, and limited institutional and forest governance capacities at national and sub-national levels.’ In his view they have failed ‘in part because deforestation is not a unitary phenomenon amenable to easy generalization, much less global governance.’⁶² Alternative paradigms of ecological governance are required that do not replicate the failings of contemporary international environmental and climate law.

2. *Towards Effective Green Governance?*

The scale, dimensions and urgency of climate change and the manifest inadequacies of contemporary environmental governance have prompted calls for alternative ways of addressing what is perhaps the single biggest threat facing humanity. The most interesting arguments are those that argue that the way forward is not more law but governance regimes based on different ways of thinking.

International legal governance regimes take two main forms: voluntary initiatives comprising soft law or mandatory and enforceable regulatory framework. Trading mechanisms like REDD+ and carbon markets and the Yasuni ITT initiative fall into the first category. Mandatory emissions caps, carbon taxes and international criminal law, so-called command and control mechanisms, are examples of the latter. The concept of New Global Commons and the Universal Declaration of the Rights of Mother Earth are hybrids. In addition, there are increasing calls to use rights as the organising principles for green governance – both human rights and the rights of nature and Mother Earth. For Cullinan, environmental destruction stems from ‘the fact that current legal systems are designed to perpetuate human domination of nature instead of fostering mutually beneficial relationships between humans and other members of the earth community.’⁶³

2.1 *Rights of Mother Earth*

In recent years an alternative to Western neoliberal approaches to environmental destruction has emerged in Latin America, based on the idea of *Pachamama* (Mother Earth) that animates the relationship of indigenous Andean peoples to nature. It is reflected in the People’s Agreement on

⁶² Boyd, note 14 at 866.

⁶³ Cormac Cullinan (2011) *Wild law: a manifesto for earth justice* (2nd Ed.) Vermont: Chelsea Green, 1114.

of the Rights of Mother Earth, which views global warming as an ecological and economic crisis arising from a patriarchal model of civilization based on the submission and destruction of human beings and nature.⁶⁴ It calls for a new system based, amongst other things, on the principles of harmony and balance among all and with all things; complementarity; solidarity; equality; collective well-being and the satisfaction of the basic necessities of all. It condemns capitalism for imposing ‘a logic of competition, progress and limitless growth’ in a regime of production and consumption that seeks profit without limits, separates human beings from nature and imposes a logic of domination and the commodification of everything: ‘water, earth, the human genome, ancestral cultures, biodiversity, justice, ethics, the rights of peoples, and life itself.’ The Declaration calls for the establishment of an International Climate and Environmental Justice Tribunal to promote procedural justice by ensuring that developed countries meet their emissions obligations and discharge their ecological debts.

In 2008, Ecuador became the first country in the world to constitutionalize the rights of nature.⁶⁵ Article 71 states that ‘nature, or *Pachamama*, where life is reproduced and occurs, has the right to integral respect for its existence and for the maintenance and regeneration of its life cycles, structure, functions and evolutionary processes’. Nature has the right to be restored (Art. 72) and ‘[p]ersons, communities, peoples, and nations shall have the right to benefit from the environment and the natural wealth enabling them to enjoy the good way of living’ (Art. 74).⁶⁶ In December 2010, the Bolivian Legislative Assembly passed the Law of the Rights of Mother Earth,⁶⁷ which is treated as a dynamic, living system of interconnected and interdependent communities who share a common destiny. It enshrines seven justiciable rights of Mother Earth and her constituent life systems, including human beings: to life, biodiversity, water, clean air, equilibrium, restoration and freedom from contamination. The law contrasts sharply with a constitution that has facilitated environmental destruction, and requires the conformity of all legislation to *Pa-*

⁶⁴ Adopted at the World People’s Conference on Climate Change and the Rights of Mother Earth in Cochabamba, Bolivia on 22 April, 2010 along with the Cochabamba Peoples Accord.

⁶⁵ Erin Daly (2012) ‘The Ecuadorian Exemplar: The First Ever Vindications of Constitutional Rights of Nature’ *Review of European Community & International Environmental Law*. Vol. 21 Issue 1, 63-66.

⁶⁶ The implementation of these rights has not been unproblematic. See ME Whittemore, ‘The Problem of Enforcing Nature’s Rights Under Ecuador’s Constitution: Why the 2008 Environmental Amendments Have No Bite’ (2011) 20(3) *Pacific Rim Law and Policy Journal* 659–91.

⁶⁷ Law 071 of the Plurinational State of Bolivia. This followed the proclamation of International Mother Earth Day by the UN General Assembly on 1 May 2009 (UN General Assembly Resolution 63/278 on International Mother Earth Day (A/RES/63/278). The resolution was proposed by Bolivia and adopted by consensus.

chamama and, importantly, combines institutional safeguards for nature and environmental human rights with the aim of reconciling the rights of Mother Earth with those of the poor.

2.2 *Ecocide*

A second approach to the problem of deforestation is the campaign to criminalise environmental destruction by making it the fifth crime against peace under Rome Statute that established the International Criminal Court in order to pre-empt, prevent and prohibit ecocide.⁶⁸ Both state and non-state actors would thus be brought within the ambit of international criminal law, which would impose strict liability on individuals in positions of responsibility in countries and corporations: legislators, policy makers, directors and investors. Polly Higgins, the barrister leading the campaign, argues that REDD+ ‘facilitates the flourishing of the eco-colonisation of the forests’ and neglects the rights of indigenous peoples so that neither land nor people ‘whose territory are being traded in a market of potentially massive proportions’ are being protected.⁶⁹

Ecocide is defined as ‘the extensive damage to, destruction of or loss of ecosystem(s) of a given territory, whether by human agency or by other causes, to such an extent that (1) peaceful enjoyment by the inhabitants has been severely diminished; and or (2) peaceful enjoyment by the inhabitants of another territory has been severely diminished. The campaign is designed overcome the difficulties in establishing corporate liability by building on the prohibition against ecocide in the Geneva Conventions.⁷⁰ Higgins argues that a mandatory legal regime is required to address the inadequacies of voluntary mechanisms like REDD+, which ‘create a framework within which global north nations continue to collude in the destruction of territory elsewhere.’⁷¹

An international law of Ecocide where intent was a necessary component of the crime opens up the legal loophole of sidestepping responsibility on the basis that mass damage or de-

⁶⁸ For a brief history of attempts to criminalise ecocide, see Polly Higgins, Damien Short, and Nigel South (2013) ‘Protecting the planet: a proposal for a law of ecocide’ *Crime, Law and Social Change*, 1-16. See also Polly Higgins (2010) *Eradicating Ecocide: Laws and Governance to Stop the Destruction of the Planet* London: Shephard-Walwyn.

⁶⁹ Polly Higgins (2012) *Earth is Our Business: Changing the Rules of the Game* London: Shephard-Walwyn, 64.

⁷⁰ The International Criminal Court Statute has jurisdiction over environmental damage in limited circumstances during wartime. Art. 8(2)(b)(iv) of the Rome Statute of the International Criminal Court defines a war crime, *inter alia*, as ‘[i]ntentionally launching an attack in the knowledge that such attack will cause ... widespread, long-term and severe damage to the natural environment which would be clearly excessive in relation to the concrete and direct overall military advantage anticipated.’ The area affected must exceed 200 km in length or the impact on ecosystems must be longer than three months.

⁷¹ Higgins, note 69, 88.

struction was not intended. Most corporate ecocide is not intended; often it is deemed collateral damage or an accident.⁷²

This innovative approach seeks to address the difficulties involved in using other forms of law like human rights and confronts the urgency and scale of global environmental destruction. However, there are several difficulties entailed in it, not least the slim likelihood that existing parties will agree to amend the Statute or that countries which reject the Court's jurisdiction will accept it in future.⁷³ Strict liability may be a sticking point and establishing causation may give rise to difficulties in relation to atmospheric pollution, but the main weakness with this approach, like much environmental law, is that it may serve as a deterrent but becomes operative only after the crime has been committed. International environmental law generally promotes future compliance rather than punishing non-compliance, and rare impositions of a limited range of sanctions such as trade embargoes have not deterred GHG emissions or adequately constrained deforestation.

2.3 The Yasuní-ITT (Ishpingo-Tambococha-Tiputini) Initiative

The Yasuni national park contains an estimated 846 million barrels of oil, about 20 per cent of Ecuador's reserves. In 2007, Ecuador indicated that it would be willing to refrain from exploiting the oil and protect the forest if other countries provided compensation amounting to half the anticipated income to a trust fund administered by the UN Development Programme with a board including representatives of indigenous peoples, local communities and academics – providing an anticipated yield of US\$7.2 billion.⁷⁴ Revenue from the trust fund would be used to support renewable energy sources, reforestation, and social development. The money generated will be spent on renewable energy projects (including hydroelectric, solar and geothermal projects), con-

⁷² Higgins *et al.*, note 68, 261.

⁷³ Weston and Bollier, note 34, argue that human rights should form the basis of new forms of environmental governance. However, there are several problems with this approach, as I have outlined in Sam Adelman (2010) 'Re-thinking Human Rights: the Impact of Climate Change on the Dominant Discourse' in Stephen Humphreys (ed) *Climate Change and Human Rights* Cambridge: Cambridge University Press. On the development of legally enforceable rights for nature and other than human beings in the evolution of earth jurisprudence, see Cullinan, note 63.

⁷⁴ Ecuador Yasuní ITT Trust Fund: Terms of Reference (2010): <http://mptf.undp.org/document/download/4492> (accessed 19 August 2013).

servation and reforestation of one of the most biologically diverse places on Earth.⁷⁵ Ecuador was prepared to sacrifice the market value of the oil despite the large contribution of this natural resource to its GDP so long as this was reflected in the collective willingness of the international community to address the problem of climate change.⁷⁶ The scheme would enable contributing developed states to discharge some of their ecological debt and provide an exemplar of the principle of common but differentiated responsibility. Above all, it was a novel attempt at environmental governance that sought to use Ecuador's sovereignty in a co-operative manner that pointed a way to overcome the failings of existing legal regimes. As Maria Fernanda Espinosa, the national heritage minister, put it 'We need to change the logic, we need to change the way we do things.'⁷⁷ By the end of 2012, more than US\$300 million had been promised although Western states were conspicuously absent.⁷⁸

In August, 2013 Ecuador abandoned the plan due to a lack of foreign support. The trust fund had received only US\$13 million of the US\$3.6 billion target.⁷⁹ The collapse of the plan signalled the end of an innovative model of alternative environmental governance. The Yasuní-ITT scheme was *sui generis*, fitting neither into REDD+ or the UNFCCC – its novelty the reason Norway, the biggest contributor to REDD, cited for refusing to participate.

The Yasuní-ITT project reflected an attempt to develop a different, non-anthropocentric way of seeing and being in nature that deploys the wisdom of indigenous knowledges in order to combat the ruinous environmental destruction of Western rationality.⁸⁰ The urgency of embracing new paradigms that facilitate environmentally friendly governance provides the motivation behind the idea of New Global Commons.

⁷⁵ *The Guardian* 23 November 2012: <http://www.theguardian.com/environment/2012/nov/23/yasuni-oil-ground-project> (accessed 5 August 2013).

⁷⁶ Oil rents comprised a quarter of Ecuador's GDP in 2011. Its forests comprised 0.25%. See <http://www.indexmundi.com/facts/ecuador/natural-resources-contribution-to-gdp> (accessed 19 August 2013).

⁷⁷ David Blair, 'Ecuador's novel plan to save rainforest': <http://www.ft.com/cms/s/0/7493ad72-1766-11e0-badd-00144feabdc0.html> (accessed 17 August 2013).

⁷⁸ By November 2012, US\$64 million had been formally deposited and a further US\$187 million had been promised by countries including Belgium, Brazil, France, Lebanon, Indonesia, Turkey, Spain and Qatar. Some of the funding is likely to come from agreements with companies, or in the form of debt swaps and 'technical agreements' as well as contracts and agreements with companies. John Vidal, 'Project to leave oil in ground under Yasuní park reaches \$300m,' *The Guardian*, 23 November 2012 note 75.

⁷⁹ Jonathan Watts, *The Guardian* 16 August, 2013 'Ecuador approves Yasuni national park oil drilling in Amazon rainforest': <http://www.theguardian.com/world/2013/aug/16/ecuador-approves-yasuni-amazon-oil-drilling> (accessed 17 August 2013).

⁸⁰ See Adelman, note 53.

2.4 New Global Commons

In 1968, Garrett Hardin lamented the tragedy of the commons, which results from the inability to exclude others from use of common resources, and argued that preservation of the commons is collectively desirable but economically irrational when undertaken by individuals.⁸¹ His argument has been widely discredited, not least due to Ostrom's work.

In 2009, Elinor Ostrom became the first female Nobel economics laureate for her work on the governance of commons, which demonstrated how local populations develop and enforce rules to conserve natural resources. She identified eight principles common to successful commons self-government:⁸²

1. Common pool resources (CPR) have clearly defined boundaries that facilitate the exclusion of those not entitled to access;⁸³
2. Congruence between the resource environment and its rules and governance structure;
3. Collective and participatory decision-making;
4. Enforcement of rules through effective and accountable monitors;
5. Violations are punished with graduated sanctions;
6. Conflicts dealt with through cheap and easily accessible dispute resolution mechanisms;
7. Higher-level authorities recognize the right of self-government of the resource appropriators;
8. Larger common-pool resources are organised and through rules enforced at multiple layers of nested enterprises.

There are difficulties in attempting to apply Ostrom's insights to natural resources like tropical forests that are simultaneously regarded as sovereign patrimony and as commons by numerous indigenous and local populations, between local governance of common pool resources and in-

⁸¹ Garrett Hardin (1968) 'The Tragedy of the Commons' 162 *Science* 1243.

⁸² Elinor Ostrom (1990) *Governing the Commons: The Evolution of Institutions for Collective Action* Cambridge University Press. See also Nives Dolsak and Elinor Ostrom (eds.) (2003) *The Commons in the New Millennium: Challenges and Adaptations* Cambridge MA: The MIT Press.

⁸³ CPR are subtractable resources (they are depletable and one person's use may limit that of others) managed under a property regime in which a legally defined user pool cannot be efficiently excluded from the resource domain. Common pool resources distinguish resource types and different forms of governance. In principle, CPR are accessible by everyone and are different to public goods in that their use does not preclude future users from deploying them. The governance of CPR involves solving collective problems about distribution, including how they should be managed, who should be entitled to benefit from them, and whether those excluded should be compensated.

ternational environmental and climate law regimes. Nonetheless, Ostrom shows that there are collective alternatives to sovereign control under which commons can successfully be governed. Her work highlights the multiplicity of rules, norms, principles, enforcement mechanisms, institutions and decision-making procedures at different social levels. This presents a problem for international law, whose cardinal principle is sovereignty.

Under international law, Antarctica, the high seas and deep seabed minerals, the atmosphere, and space are global commons.⁸⁴ Tropical forests are not. Global commons are resource domains to which all nations have legal access. According to Brunnée, the concept has not found purchase beyond the Law of the Sea convention and the moon treaty.⁸⁵ Given their importance as carbon sinks and the imperative of halting deforestation, it would seem sensible to designate tropical rainforests as global commons.⁸⁶ REDD+ effectively invites developing countries to auction sovereign control over forests to the highest bidders – but this may nevertheless be viewed as an improvement over the absence of control they suffered under colonialism and neo-colonialism.

The idea of the commons has been revived in recent years as the basis for developing hybrid forms of global environmental governance by multiple actors at different levels from the global to the local, with a focus on the benefits of subsidiarity. Weston and Bollier argue that classic commons operate ‘in a quasi-sovereign way, similar to the Market but largely escaping the centralized mandates of the State and the logic of Market exchange while mobilizing decentralized participation on the ground.’⁸⁷ They adopt the idea of global commons to argue for a new paradigm of green governance in which the state moves ‘from serving as the sovereign master of a closed, hierarchical system to the light-touch host of an open, diverse network.’⁸⁸ They believe that great ingenuity and courage is required

⁸⁴ There is a distinction between global and international commons deriving from the fact that the latter are exclusionary.

⁸⁵ Jutta Brunnée ‘Common Areas, Common Heritage, and Common Concern’ in Daniel Bodansky, Jutta Brunnée and Ellen Hey (eds) *The Oxford Handbook of International Environmental Law* Oxford: Oxford University Press, 563.

⁸⁶ Amongst the advocates of this approach are Ann Hooker (1994) ‘The International Law of Forests’ 34 *Natural Resources Journal* 855-856 and A. Dan Tarlock (1997) ‘Exclusive Sovereignty Versus Sustainable Development of a Shared Resource: The Dilemma of Latin American rainforest Management’ 32 *Texas International Law Journal* 37-66.

⁸⁷ Weston and Bollier, note 34, xx.

⁸⁸ *Ibid.*, 257.

in developing new institutions and modes of law to address the singular ecological and social challenges of our time. A blind reliance on existing precedents will not be enough to escape the old paradigms of law and policy that are, at root, a large part of the problem.⁸⁹

They aim to develop ‘a new template of effective and just environmental protection based on the new/old paradigm of the commons and an enlarged understanding of human rights’⁹⁰ through the construction of governance through a rights-based, decentralised Vernacular Law (in contrast to formal state law) that privileges the local because it is at that level, as Ostrom has shown, that respect for nature is most likely to be found. Vernacular Law, which they view as a complement to rather than a substitute for the regulatory frameworks of the ‘State/Market,’ is comprised by

the “unofficial” norms, institutions, and procedures that a peer community devises to manage its resources on its own, and typically democratically. State law and action may set the parameters within which Vernacular Law operates, but the State does not directly control how a given commons is organized and managed. (For now, especially for global geo-physical common-pool resources such as the oceans and atmosphere, Vernacular Law takes a backseat to the State and the existing, inadequate system of multilateral institutional governance.)⁹¹

The New Commons is

an ecological governance paradigm [that] may be understood less as an ideology than as an intellectual scaffolding that can be used to develop innovative legal and policy norms, institutions, and procedures relative to a given resource or set of resources. These new structures, however, do not evolve of themselves, nor are they State-directed. Instead, they are animated by commoners who have the authority to act as stewards in the management of the given resource.⁹²

Commons are generally independent of state control and do not require sovereign imprimatur to be effectively governed. They are used, managed and protected according to norms, practices

⁸⁹ *Ibid.*, 260.

⁹⁰ *Ibid.*, xix.

⁹¹ *Ibid.*, xx. They use the internet as an example of the possibilities of Vernacular Law or what they sometimes refer to as microlaw - perhaps an unfortunate template in light of Edward Snowden’s exposure of the activities of the surveillance state in the Guardian and the New York Times in 2013.

⁹² *Ibid.*, 124.

and traditions generated and enforced by the community itself under what they term Vernacular Law, ‘the unofficial norms, institutions, and procedures that a peer community devises to manage community resources on its own. State Law and action may set the parameters within which Vernacular Law operates, but it does not directly control how a given commons is organized and managed’. Successful commons governance is not contingent on individual property rights or state control. They operate

in a quasi-sovereign manner, largely escaping the centralized mandates of the State and the structures of Market exchange while mobilizing decentralized participation on the ground. A commons enacts new forms of governance without becoming government ... Drawing on its self-created Vernacular Law, a commons asserts its own form of moral and social sovereignty, developing new norms for defining legitimate social action and new rule sets for community governance.⁹³

Localised, non-hierarchical, particularistic and sometimes idiosyncratic norms, rules and practices are no more impediments to effective international environmental than national or municipal legislation; most legal systems emerge from plural roots.

Conclusion

Contemporary international legal regimes governing deforestation and greenhouse gas emissions are clearly deficient. They remain trapped in sovereign-centric, hierarchical thinking apparently receptive only to neoliberal market forces as an alternative. As such, it is undemocratic and unaccountable. In addition, it places a premium on science and possessive individualism. Much environmental and climate law is soft and unenforceable; it is characterised by a proliferation of principles rather than rules. Sadly, the ‘story of international forest policy has largely been one of national economic interests triumphing over international environmental issues, of State sovereignty triumphing over common concern.’⁹⁴

The need for a new paradigm of environmental governance is clear, but this is easier to conceive than realise. The failure of the Yasuní-ITT initiative highlights the extent of the problem. It offered a viable scheme for reconceptualising the role of sovereignty by implementing the princi-

⁹³ Weston and Bollier, note 34, 125-26.

⁹⁴ David Hunter, James Salzman and Durwood Zaelke (2011) *International Environmental Law and Policy* (4th Ed.) New York: Foundation Press/Thomson Reuters, 1145.

ple of common but differentiated responsibility in an innovative way that ‘imagine[d] a global commons of interdependent participants and a new way to realign relationships among the industrialized nations and poorer nations’ – in the words of Alberto Acosta, an ‘opportunity to re-think the world.’⁹⁵

It is difficult to disagree with Boyd’s observation that ‘we need a fresh vocabulary, an expanded set of concepts, alternative ways of framing the challenges, but more importantly, new ways of understanding the conditions of possibility for climate governance that build upon past efforts without sliding back into the worn grooves of prior thinking.’⁹⁶

It is possible that we are witnessing the slow and uneven emergence of global or transnational environmental law that reflects the imperatives and realities of multi-level, non-hierarchical governance involving non-state actors as much as states and corporations. If so, this will not signal the eclipse of sovereignty: ‘The regulatory State will continue to be, in at least the short run, the dominant governance system, and it will continue to share its authority with the “private governance” that large corporations and global investors visit upon countless communities and millions of people. Yet, the once-impregnable edifice of the State/Market is now seen, correctly, as vulnerable.’⁹⁷ It is increasingly difficult to deal with the consequences of the outdated paradigm of sovereignty that authorises or facilitates environmental destruction, but equally difficult to conceive solutions that do not enjoy its imprimatur.

French’s assertion that sovereignty ‘is not the antithesis to environmental protection, far from it’ is regularly contradicted by the continuing environmental destruction wreaked by deforestation and GHG emissions, raising the question of whether sovereignty is able to save itself from itself.

⁹⁵ Weston and Bollier, note 34, 255.

⁹⁶ Boyd, note 14, 466.

⁹⁷ Weston and Bollier, note 34, 20.