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The Ecosystem Approach between Ecocentrism and Anthropocentrism

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1. Introduction

A growing number of legal scholars¹ have identified the root of the unfolding ecological crises with Law's reflection of a "harmful and outdated anthropocentric worldview".² Law's contribution "in constructing, maintaining and perpetuating anthropocentrism"³ becomes thus a crucial theme. Anthropocentrism implies locating value *intrinsically*, that is independently of external attributions or valuations, *only* with regards to human beings.

¹ See, *ex pluribus*, Cullinan, C., *Wild Law: A Manifesto for Earth Justice*, (Siber Ink, South Africa, 2002), and Bosselmann, K., *The Principle of Sustainability: Transforming Law and Governance*, (Ashgate, 2008), Stone, C.D., *Should Trees Have Standing? Law, Morality, and the Environment*, (Third Edition, Oxford University Press, 2010), Burdon, P. D., *Earth Jurisprudence: Private Property And Earth Community*, (PhD Thesis, Adelaide Law School The University Of Adelaide, May 2011), Grear, A. 'The Vulnerable Living Order: Human Rights and the Environment in a Critical and Philosophical Perspective' 2/1 (2011) *Journal of Human Rights and the Environment* 23, and in general all scholars writing from the perspective of the emerging legal philosophy called Earth Jurisprudence, see Burdon, P.D. (ed) *Exploring Wild Law: The Philosophy of Earth Jurisprudence*, (Kent Town: Wakefield Press 2011b)

² Burdon 2011 (n. 1) at 131

³ Burdon 2011 (n. 1) at 131

All else, in this view, has value only *instrumentally*, that is, in light of the benefits that the non-human world of things and beings may provide to humanity. Restating this in a Kantian vocabulary, in this view only humans are ends, by virtue of their reason, while other entities are only means. Indeed, Kant – summarizing the prevailing western moral approach - assumed the position that “man [...] is the ultimate purpose of creation here on Earth”.⁴ Environmental philosopher Bryan Norton accordingly describes anthropocentrism as “the view that the earth and all its nonhuman contents exist or are available for man’s benefit and to serve his interests and, hence, that man is entitled to manipulate the world and its systems as he wants, that is, in his interest”.⁵ Anthropocentrism - and its associated rationalities⁶ - is variously predicated on modernity’s dualist ontology,⁷ its methodological reductionism,⁸ or its epistemology of mastery.⁹ It is a thoroughly modern worldview,¹⁰ and has thus arguably shaped legal modernity, operating – despite the diversity of legal cultures - as the fundamental way modern Law organizes, categorizes, and orders reality,¹¹ and particularly nature.¹²

⁴ As quoted by Gillespie, A. *International Environmental Law, Policy and Ethics*, (Clarendon Press Oxford 1997) at 3

⁵ Norton, B.G., ‘*Why Preserve Natural Variety?*’(Princeton, NJ: Princeton University Press, 1987), p. 136 as quoted in Rolston, H. III, ‘Converging versus Reconstituting Environmental Ethics’ in Minter, B.A., (ed) *Nature in Common? Environmental Ethics and the Contested Foundations of Environmental Policy* (Philadelphia: Temple University Press, 2009) at 97

⁶ It must be noted here that while in this account I am speaking of anthropocentrism as a single entity, in the literature – and in international law – there are a number of variants, or gradations, ranging from unabashed resourcism to stewardship models of soft anthropocentrism. Hence the reference to “associated rationalities”. The core, however, remains the same: the centrality and privileged position of humanity *viz* the rest of the world. See Curry, P., *Ecological Ethics. An Introduction*, Second Edition, Polity, 2011

⁷ Modern Cartesian dualist ontology is predicated on the separation between *res cogitans* and *res extensa*. *Res cogitans* – reason, mind – is the exclusive prerogative of humans. Everything else – *res extensa* – is only inert matter. This produced a fracture between the mind and the body, the subject and the object. See, *ex pluribus*, Grear 2011 (n. 1)

⁸ Thus, *ex pluribus*, Tallacchini, M., *Diritto per la Natura. Ecologia e Filosofia del Diritto* (Giappichelli Editore, 1996) and Godden, L., *Nature as Other: The Legal Ordering of the Natural World* (PhD Thesis, Faculty of Law, Griffith University, 2000)

⁹ More usually referred to as mastery, or domination, of nature. In a nutshell, Bacon would summon ‘Nature with all her children to bind her to [our] service and make her [our] slave’, Leiss, W., *The Domination of Nature* (McGill-Queens University Press, 1994) at 57. See also Merchant, C., *The Death of Nature: Women, Ecology and the Scientific Revolution*, New York: HarperCollins, 1980

¹⁰ Italian legal historian Paolo Grossi contrasts the anthropocentrism of modernity with the *reicentrism* of the middle ages, see for example Grossi, P., *L’Europa del Diritto*, Laterza, 2001

¹¹ See for example Grossi, P., *L’Ordine Giuridico Medievale* (Editori Laterza, 2011), where he explains his notion of “juridical experience”, and more specifically Godden 2000 (n. 8)

¹² See *ex pluribus* Tallacchini 1996 (n. 8); Godden 2000 (n. 8); Burdon 2011(n. 1); Grear 2011 (n. 1)

The orientation of law, through its reception of ecological and eco-philosophical innovations, is seen however as changing. Some authors tend in fact to read the history of positive environmental law – both domestic and international - as evidence of the rise of a discernible progression from anthropocentrism to bio- or eco-centrism. Emmenegger and Tschentscher point to a progression “from a purely anthropocentric vision [...] to acknowledging an intrinsic value of nature”, marking “a change of the predominant paradigm in international environmental law”.¹³ Brooks, Jones and Virginia show how the evolution of the relationship between law and ecology in the US has led to the current model of “ecosystem regimes”.¹⁴ Others speak of an on-going transition from “egocentric” to “ecosystem approaches” to environmental protection.¹⁵

Such narratives seem to provide evidence of a process of a trickling up of the ecological worldview. The question I will address in this article then is whether and to which extent the ecosystem approach is one dimension of this process of trickling up, or whether the new language of ecosystems remains contained within a legal ordering still expression of more outdated ontologies of humanity and nature.¹⁶

The relevance of the ecosystem approach as a way to assess this process rests on its purported orientation *away* from reductionism, and *towards* attending holistically to the wider socio-ecological context of the specific target/object of protection, as well as of human activities. As such, the ecosystem approach represents the articulation and incorporation of a number of ecological principles in law: it supposedly abandons fragmentation, and leads (legal, regulatory) attention *away* from individual objects, or set of objects, such as individual species. It rather leads attention *towards* systemic wholes,

¹³ Emmenegger, S. and Tschentscher, A., ‘Taking Nature's Rights Seriously: The Long Way to Biocentrism in Environmental Law’ 6/3 (1994) Georgetown International Environmental Law Review 545 at 547-548

¹⁴ Brooks, R.O., Jones, R. and Virginia, R.A. *Law and Ecology: The Rise of the Ecosystem Regime* (Ashgate 2002)

¹⁵ See Christie, W.J., Becker, M., Cowden, J.W., and Vallentyne, J.R., ‘Managing the Great Lakes Basin as a Home’ (1986) 12/1 Journal of Great Lakes Research 2 at 4. Indeed the Great Lakes is one clear example of the integration of ecosystem ecology into a transboundary legal framework, as evident in the 1978 Agreement Between Canada and the United States of America on Great Lakes Water Quality, as amended in 1983, 1987 and 2012

¹⁶ Emmenegger and Tschentscher 1994 (n. 13) recognize how in the field of international environmental law – and sometimes within individual legal instruments –different underlying ethical orientations inform specific provisions and/or Treaties

complex webs, flows and relationships, and it aims at integrating “laws relating to living things and those that relate to the inanimate physical media that support them”.¹⁷

In order to address the main question raised, I will first briefly discuss ecology in its double capacity of science and worldview. This in order to provide a framework of ambiguity within which to place the remaining discussion, in particular as regards the central role of values. Subsequently I will try to locate the ecosystem approach, outlining its elusiveness and the contestations over its meaning. Then I will describe what I call the ecocentric ecosystem approach. In this ecocentric sense, the ecosystem approach is aligned with much of the critique levelled against law’s anthropocentrism. I will then move to discuss the ecosystem approach in international law, so as to show the effects that the normative context within which it is finding expression is having on its interpretation, with particular reference to the relationship between the ecosystem approach and sustainable development. Finally, I will draw some conclusions.

1.1 Some Methodological Clarifications

Before going forward, some methodological clarifications are in order.¹⁸ Firstly, I will for the purpose of this article subsume under the expression “ecosystem approach” the entire spectrum of ecosystem-oriented frameworks existing within environmental law and policy. I will mention some in section 2.2.2. The main reason is that I intend to capture at a general level the effects of the percolation of an ecosystem orientation in law, being aware, however, of the significant differences implicated by different terminologies.¹⁹ Having clarified that, I will nonetheless still use, occasionally, the expression ecosystem management in direct quotations, or if warranted by the context of the discussion (for example if the study I am discussing uses the expression ecosystem management).

¹⁷ Howarth, W., ‘The Progression towards Ecological Quality Standards’, *Journal of Environmental Law* 18:1 (2006) at 4

¹⁸ Being mindful of the call for “*some thought-out*” methodological position as a sign of a mature environmental legal scholarship, Fisher, E., Lange, B., Scotford, E. and Carlane, C., ‘Maturity and Methodology: Starting a Debate about Environmental Law Scholarship’, *Journal of Environmental Law* (2009) 21 (2): 213-250 at 217, emphasis in the original. The term “some” stands to indicate the methodological pluralism of environmental legal scholarship

¹⁹ See for an example of a schematic distinction between terminologies and paradigms FAO, *Fisheries Management. The Ecosystem Approach to Fisheries*. FAO Technical Guidelines for Responsible Fisheries. No 4, Suppl. 2. Rome, Food and Agriculture Organizations of the United Nations, 2003

Secondly, I will mostly operate within the contexts of biodiversity protection. In this respect I will not discuss the strand of ecosystem approach developed particularly within the context of transboundary waters. I will, however, refer to a number of studies which developed the concept – either scientifically or normatively – within that context.

Thirdly, I will deploy the concept of normative narrative so as to capture the broad processes of normative development as tracked by focusing on one particular element – that is, the ecosystem approach - while allowing drawing from non-strictly legal sources. This notion draws inspiration from Sacco’s notion of legal formant, with particular reference to what Sacco calls “declamatory statements”. Such statements “may not be strictly legal”,²⁰ and rather be “propositions about philosophy, politics, ideology or religion”,²¹ yet they contribute to the development of legal norms. Similarly, the concept of interstitial norms developed by Lowe are characterized by the diffusion of participation in their development, a development which “may involve a very wide range of contributors”,²² indeed, a “much wider range of concepts and social pressures come to shape these interstitial norms than is ordinarily the case”.²³

This approach allows incorporating thus documents, definitions and descriptions which, albeit not formally legal or doctrinal, provide significant narrative evidence of a particular interpretation of the ecosystem approach within international normative, institutional, policy and political contexts.²⁴ This is in fact especially useful in the case of the ecosystem approach: the more ambiguous and indeterminate is a legal formulation or principle, the wider is the set of legal formants that may come into play.

²⁰ Sacco, R. ‘Legal Formants: A Dynamic Approach to Comparative Law (Installment I of II)’, *The American Journal of Comparative Law*, Vol. 39, No. 1 (Winter, 1991), pp. 1-34 at 32

²¹ Sacco 1991 (n. 20) at 32

²² Lowe, V., ‘The Politics of Law-Making: Are the Method and Character of Norm Creation Changing?’ in Byers, M. (ed) *The Role of Law in International Politics*, (Oxford: Oxford University Press, 2000) at 220

²³ Lowe 2000 (n. 22) at 220. Lowe refers in particular to the concept of sustainable development, within the context of International Law

²⁴ There is no space here to provide a more detailed account of this methodological approach, so this brief outline is hopefully sufficient for the purpose of this article

2. PART I: An Elusive and Contested Concept

2.1 Ecology as Science *and* Worldview

When one speaks of ecology, the term can be understood in at least two senses. Its first and more immediate sense refers to ecology as a science. Ecology is then firmly located within the paradigm of modern science. The term ecology however evokes a second field of meaning. Ecology in this second sense is a source of normativity. It operates not as a science, but as a philosophical and ethical framework, as a worldview, in order to (re)orient the relationship between humanity and the non-human world.

In postmodern accounts of society however, science can no longer provide certainty as regards statements of facts or assessments of risks, as ignorance acquires a crucial epistemic role.²⁵ Moreover, in the context of “truth pluralism”²⁶ - that is of competing claims to truth which cannot be adjudicated objectively - science is fully revealed to be “normative science”.²⁷ This, in a certain sense, is not new: knowledge and values are entangled on both objective and subjective grounds.²⁸ Every decision then carries within it specific normative, ethical and political commitments arising from both scientific and legal processes.²⁹ These considerations partly displace the problematic of deriving normative implications from science,³⁰ as normative choices are *always already* embedded in science itself. Ecology, in this sense, is *always already* a worldview. The question then becomes what is the underlying value system embedded in a particular deployment of ecology. More importantly, particularly for the purposes of this article,

²⁵ Thus for example Tallacchini, M., ‘A Legal Framework from Ecology’ (2000) 9/8 Biodiversity And Conservation 1085

²⁶ Gutwirth, S. and Naim-Gesbert, E., ‘Science et droit de l’environnement: réflexions pour le cadre conceptuel du pluralisme de vérités’ 34 (1995) *Revue interdisciplinaire d'études juridiques*, 33

²⁷ Gutwirth 1995 (n. 26) at 61: ‘Le pluralisme de vérités montre bien que ce rôle absolu, extra-politique, extra-juridique et indiscutable accordé à la science et ses verities est inacceptable’. See also, on normative science, Lackey, R.T., ‘Appropriate use of ecosystem health and normative science in ecological policy’ in Rapport, D.J., Lasley, W.L., Rolston, D.E., Nielsen, N.O., Qualset, C.O., and Damania, A.B., *Managing for Healthy Ecosystems*, (CRC Press, 2002)

²⁸ See Tallacchini 2000 (n. 25), particularly at 1096; Shrader-Frechette, K.S. *Risk and Rationality. Philosophical Foundations for Populist Reforms*, Berkeley: University of California Press, 1991; Shrader-Frechette, K.S., ‘Methodological Rules for Four Classes of Scientific Uncertainty’ in Lemons, J. (ed) *Scientific Uncertainty and Environmental Problem Solving*, (Blackwell, Oxford, 1996) at 12-39

²⁹ Tallacchini 2000(n. 25) at 1095

³⁰ See for example deLaplante, K., ‘Environmental Alchemy: How to Turn Ecological Science into Ecological Philosophy’, *Environmental Ethics* 26 (2004) 361-80, where he observes how it is highly problematic to derive *unique* philosophical consequences from the science of ecology

what is the value system embedded in law. In this sense the literature distinguishes – in relation to the contributions of ecology to different philosophical and ethical orientations - two different positions, called variously environmentalism and ecologism³¹ or shallow and deep ecology.³² Particularly with regards to the latter pair, the distinction intends to provide a demarcation line which separates *shallow* liberal environmentalism – the prevalent ideological orientation in environmental law, and environmental discourse more in general, today³³ – from *deep* ecological critiques, emphasizing the need for a rupture with the entire prevailing cultural paradigm.³⁴

Having outlined how all science is normative, which means that law cannot delegate to science the selection of the appropriate course of action on the premise of science’s access to an objective truth, the next step will be to locate the ecosystem approach, a rather elusive and contested concept.

2.2 The Ecosystem Approach: an Elusive and Contested Concept

As has been noted, attempting to provide an answer to the question “what is the ecosystem approach” is a difficult task from both a scientific and legal perspective.³⁵ The concept is in fact “interpreted differently in different contexts”,³⁶ and has “has proven difficult to define in a simple manner”.³⁷ To be sure, things have undoubtedly progressed since the time when biologist Robert Grumbine lamented that the ecosystem approach³⁸

³¹ Thus Tallacchini 1996 (n. 8)

³² Thus Næss, A., ‘The shallow and the deep, long-range ecology movement. A summary’, *Inquiry*, 1973, 1, 95-100. See also Curry 2011 (n. 6)

³³ See, *ex pluribus*, Wilkinson, D. ‘Using Environmental Ethics to Create Ecological Law’, in Holder, J. and McGillivray D. (eds) *Locality and Identity: Environmental Issues in Law and Society* (Ashgate/Dartmouth 1999) and, especially, Bernstein, S., *The Compromise of Liberal Environmentalism*, New York: Columbia University Press, 2001

³⁴ Næss’ original distinction hinged on the fact that shallow environmentalism fights instead “against pollution and resource depletion” and that its “central objective [is] the health and affluence of people in the developed countries”, Næss 1973 (n. 32) at 95

³⁵ See Long, R., ‘Legal Aspects of Ecosystem-Based Marine Management in Europe’, in: Chircop, A., McConnell, M. L. and Coffen-Smou, S. (eds.) *Ocean Yearbook* (The Hague: Hjhoff, 2012)

³⁶ Report on the work of the United Nations Open-ended Informal Consultative Process on Oceans and the Law of the Sea at its Seventh Meeting, (New York, 12–16 June 2006) (UN Doc. A/61/156, 17 July 2006) (ICP-7report) at para 6

³⁷ Secretariat of the CBD, *The Ecosystem Approach* (CBD Secretariat, 2004), at 3 available at <http://www.cbd.int/doc/publications/ea-text-en.pdf>

³⁸ Which he refers to as “ecosystem management”

was still being “perceived by many as a buzzword”.³⁹ Some authors begin to recognize some “substantial agreement” on some “core elements” of the ecosystem approach.⁴⁰ Yet the ecosystem approach remains a slippery, somewhat elusive and contested concept, both in science and in law. This character places the ecosystem approach squarely within what has been called “hot law”,⁴¹ and for at least three inter-related reasons (which incidentally have also determined its success⁴²): conflicting values; a confusing ensemble of labels and terminologies; the contestations over the underlying concept of ecosystem. To these we now turn.

2.2.1 Conflicting values

First, the ecosystem approach is situated within a space of conflicting values: different understandings of the meaning of the ecosystem approach testify to sometimes irreducible contestations over the values underlying and informing ecological science and environmental law. In this sense Stanley distinguishes between an anthropocentric and a biocentric view of ecosystem management.⁴³ The crucial difference in Stanley’s account is that while the biocentric view considers resources utilization secondary to the primary – and constraining - goal of the maintenance of ecological integrity, the anthropocentric

³⁹ Grumbine, E., ‘What is Ecosystem Management?’ 27:7 (1994) *Conservation Biology* at 27. But see also Grumbine, ‘Reflections on “What Is Ecosystem Management?”’ 11:1 (1997) *Conservation Biology* at 41, where Grumbine reiterates that “In 1993 EM was perceived by many as a buzzword, a concept whose definition was slippery, imprecise. In 1996, after numerous papers and policy documents, many thousands of hours of discussion, and significant first attempts at implementation, EM still is often perceived as such”

⁴⁰ Thus Trouwborst, A., ‘The Precautionary Principle and the Ecosystem Approach in International Law: Differences, Similarities and Linkages’ *RECIEL* 18(1) 2009, 26 at 28. Trouwborst enumerates three core elements upon which there is such substantial agreements: 1) the holistic management of human activities 2) the requirement to base management on the best available knowledge and 3) the aim of satisfying human needs in ways which do not compromise the integrity and health of ecosystems, at 28. These core elements however vary significantly. Within the context of fisheries for example some authors list up to 7 elements common to an ecosystem approach to marine policies, Fabra A. and Gascón, V., ‘The Convention on the Conservation of Antarctic Marine Living Resources (CCAMLR) and the Ecosystem Approach’ 23:3 (2008) *International Journal of Marine and Coastal Law*, 567 at 569

⁴¹ Environmental Law is considered “hot law” insofar as it deals with “‘hot situations’ in which the agreed frames, legal and otherwise, for how we understand and act in the world are in a constant state of flux and contestation”, Fisher, E., ‘Environmental Law as ‘Hot’ Law’, *Journal of Environmental Law* 25:3 (2013), 347 at 347-348

⁴² Success as measured in terms of how widely the ecosystem approach has been deployed at least rhetorically

⁴³ Stanley, T.R. Jr., ‘Ecosystem Management and the Arrogance of Humanism’ 9:2 (1995) *Conservation Biology*, 255. It must be noted that in the American literature the term ecosystem management is predominant.

version has as its primary goal that of optimizing human resources use, though including ecological considerations in its management horizon.⁴⁴

Yaffee's distinction is more nuanced, as he identifies three models of ecosystem management, each infused with specific meanings reflecting different interests, values and knowledges. He calls these three models environmentally sensitive multiple use; ecosystem approach to resource management; ecoregional management.⁴⁵

Environmentally sensitive multiple use has an anthropocentric outlook and its goal is to allow multiple human uses in an environmentally rational manner. The ecosystem approach to resource management has a biocentric outlook, and incorporates holistic thinking and the recognition of the complexity of ecological systems. Ecoregional management has an ecocentric outlook, and "shifts management focus toward ecosystem processes and away from biota".⁴⁶

Secondly, the concept assumes different meanings in accordance with varying perspectives, contexts and actors. Meffe and colleagues listed for example 40 different definitions, each emphasizing differently different key elements of the ecosystem approach.⁴⁷ Brooks, Jones and Virginia identified 11 definitions, also showing different emphases according to the particular epistemic community or interest group producing or advancing the particular definition. Hence ecologists, government agencies, multi-stakeholder groups and natural resource users groups all seem to propose significantly different definitions, with emphases placed coherently with the main stakes for each group.⁴⁸

2.2.2 Labels and terminologies

This ambiguity also translates into a tangle of terminologies utilized in various normative contexts: ecosystem approach; ecosystem management; ecosystem-based approach to management; ecosystem-based management; ecosystem process-oriented approach;

⁴⁴ And Stanley concludes that it is the second view which dominates actual practice, Stanley 1995 (n. 43)

⁴⁵ Yaffee, S. L., 'Three Faces of Ecosystem Management' 13:4 (1999) Conservation Biology, 713

⁴⁶ Yaffee, 1999 (n. 45) at 713 (in abstract)

⁴⁷ Meffe, G., Nielsen, L., Knight, R., L., Schenborn, D., *Ecosystem Management: Adaptive, Community-Based Conservation* (Island Press; 1 edition, 2002)

⁴⁸ Brooks, Jones and Virginia 2002 (n. 14) at 268-269

ecosystem approaches; ecosystem-based approaches, total ecosystem management.⁴⁹ Additionally, within the context of thematic or cross-cutting programs of work under the Convention of Biological Diversity, the following terms have been used: ecosystem approach; ecosystem process-oriented approach; ecosystem management approach; ecosystem-based approach; integrated approach; integrated agro-ecosystem approaches; holistic approach.⁵⁰ But there exist even more elaborate labels.⁵¹ Other differences may point to specific fields of application, such as FAO's ecosystem approach to *fisheries* management (or alternatively ecosystem-based fishery management), or EU's ecosystem approach to *marine* management.⁵² Whether or not the different terminologies refer also to substantive difference in the understanding of the concept is not entirely straightforward. One significant distinction has to do with the object of "management". Labels such as ecosystem approach or ecosystem-based management – as opposed to for example ecosystem management - are supposed to incorporate the notion that it is "human activities which are being managed, rather than the ecosystem within which they take place".⁵³

FAO, within the context of fisheries management, has attempted to provide a schematic and systematic account of the terminological landscape, and has tried to map the various

⁴⁹ This last one in particular I only found in Wang, H., 'Ecosystem Management and Its Application to Large Marine Ecosystems: Science, Law, and Politics', *Ocean Development & International Law*, 35:41–74, 2004

⁵⁰ Stadler, J., and Korn, H., 'The "ecosystem approach" in the light of COP decisions and background papers' in Korn, H., Stadler, J., Maltby, E. and Kerr, A. (eds.), *Report on the scientific workshop on "The ecosystem approach - what does it mean for European ecosystems?"* (BfN, Bonn, 1999)

⁵¹ Wang reports that "[t]here are many other related terms, such as a bioregional approach; bioregional planning; ecoregion-based conservation; watershed management approach; holistic, intersectoral, and interactive approach; ecosystem approach that integrate the conservation of biological diversity and the sustainable use of biological resources; ecosystem approach that integrate the conservation and sustainable use of biological diversity as well as socioeconomic considerations; and precautionary ecosystem management approach", Wang 2004 (n. 49) at 43, footnote 24

⁵² "The CFP shall implement the precautionary and eco-system approaches to fisheries management", Proposal for a Regulation Of The European Parliament And Of The Council on the Common Fisheries Policy (COM/2011/0425 final), Explanatory Memorandum, point 1. However even within the same document, consistency of terminology is far from satisfactory, as in both preamble, chapeau 9, in article 2(3) and in article 5 of the proposal the label used is "ecosystem-based approach to fisheries management".

⁵³ As reported in the Report of the Reykjavik Conference on Responsible Fisheries in the Marine Ecosystem, Reykjavik, Iceland, 1–4 October 2001, at Section H, para 7 of the Observations from the Scientific Symposium by the Co-chairs, Mr Michael Sinclair and Mr Jóhann Sigurjónsson. This conclusion was then incorporated in the Report on the work of the United Nations Open-ended Informal Consultative Process on Oceans and the Law of the Sea at its Seventh Meeting, (New York, 12–16 June 2006) (UN Doc. A/61/156, 17 July 2006) (ICP-7report) at para 29: "Many delegations underlined that ecosystem approaches should address the management of human activities affecting oceans and seas, and not the management of ecosystems per se"

terminologies to “two different but related [and converging] paradigms”:⁵⁴ ecosystem management and fisheries management. According to FAO’s analysis, the former takes an ecocentric perspective,⁵⁵ while the latter is more anthropocentric.⁵⁶ FAO makes a specific distinction of *both* terminologies and represented concepts, or paradigms.⁵⁷ Thus FAO speaks of Fisheries Management; Ecosystem Management; Ecosystem Approach; Ecosystem,-based Fisheries Management; Ecosystem Approach to Fisheries; Integrated Management. According to FAO moreover, and particularly as regards the version of the ecosystem approach FAO adopted (Ecosystem Approach to Fisheries), most of its “principles and conceptual elements [...] are already contained in a number of binding or voluntary arrangements, agreements, conventions (global or regional), codes, etc., of direct or indirect relevance to fisheries”.⁵⁸ The Ecosystem Approach to Fisheries, in other words, is already part and parcel of international conservation practices, and has already found specific legal expression. Its main challenges reside in ensuring coherence to this fragmented picture, and in its implementation.⁵⁹

2.2.3 The Concept of ecosystem is equally contested

The third reason which both makes the ecosystem approach a contested concept, and facilitates its success, is that the naturalistic underpinning of the ecosystem approach - the concept of ecosystem - is an equally ambiguous and contested concept. First, there exist very many definitions.⁶⁰ Secondly, as philosopher of ecology Kevin deLaplante observes,

⁵⁴ FAO, *Fisheries Management. The Ecosystem Approach to Fisheries*. FAO Technical Guidelines for Responsible Fisheries. No 4, Suppl. 2. Rome, Food and Agriculture Organizations of the United Nations, 2003 at 11

⁵⁵ It aims in particular at the protection and conservation of “the structure, diversity and functioning of ecosystems”, especially through protected areas, FAO 2003 (n.54) at 11

⁵⁶ It “aims to meet the goals of satisfying societal and human needs for food and economic benefits through management actions that focus on the fishing activity and the target resource”, FAO 2003 (n.54) at 11

⁵⁷ Garcia, S.M., Zerbi, A., Aliaume, C., Do Chi, T., Lasserre, G., *The Ecosystem Approach to Fisheries: Issues, Terminologies, Principles, Institutional Foundations, Implementation and Outlook*, FAO Fisheries Technical Paper 443 Food And Agriculture Organization Of The United Nations Rome, 2003 “Terminology and Paradigms” is the title of Chapter 1

⁵⁸ FAO 2003 (n.54) at 2

⁵⁹ Thus also Long, who maintains that “the absence of a universally accepted definition of the “ecosystem approach” or “ecosystem-based management” in international or EU law does not appear to have led to any intractable problems regarding the implementation of the concept in practice”, Long 2012 (n. 35) at 421

⁶⁰ According to Hatcher and Bradbury, for example, there exist at least forty different definitions of ecosystem, Hatcher, B. H. and Bradbury, R. H. ‘Marine Ecosystem Management: is the Whole Greater than the Sum of the Parts?’ in Rothwell, D.R. and VanderZwaag D.L. (eds) *Towards Principled Oceans Governance. Australian and Canadian Approaches and Challenges* (Routledge 2006) at 208

the “term “ecosystem” has multiple meanings and uses”.⁶¹ Within this multiplicity, some consider ecosystems well defined objective entities,⁶² while others maintain that there is no objective entity comprised of communities and capable to reach a stable equilibrium, hence any “attempt to preserve any such thing [i.e. ecosystems]” is misguided.⁶³

Third, as still deLaplante observes, the concept of ecosystem is used in at least three primary senses: as object, as theory and as method. As an *object*, the ecosystem refers to the interaction of biotic and abiotic elements within a spatially defined area. As a *theory*, its aim is to describe and explain the flow of energy and matter in an ecosystem. As a *method*, it is the application of an ecosystem methodology (an “ecosystem approach to...”) to a variety of other fields. In this last sense the ecosystem approach is a “style of research” characterized by the qualifier “an ecosystem approach to...”, and it may be equally applied to environmental management, to public education, to human well-being, to fisheries, or to urban development. Its main feature is that it entails situating the focus of the investigation within its broader environmental context, on the assumption that at least some of its properties depend on interactions and relations with the environment within which the focus is situated.⁶⁴

Yet, as Golley emphasizes, this very ambiguity inherent in the idea of ecosystem has determined its success. The concept has indeed proved attractive to both the environmental movement of the 1960’s and 1970’s, keen to utilize the morally-inspired metaphors of holism and Mother Earth, and to managers and industrialists, keen to deploy its technical and mechanistic dimensions with a view to manage and control natural systems.⁶⁵ This dovetails with Daniel Worster’s notion of the “moral

⁶¹ deLaplante, K., ‘Is Ecosystem Management a Postmodern Science?’ in Cuddington, K.E. and Beisner, B.E. (eds.) *Ecological Paradigms Lost: Routes of Theory Change* (Academic Press, 2005), 397-416 at 398

⁶² See for example, Soulé, M., ‘The Social Siege of Nature’ in Soulé, M. and Lease, G. (eds), *Reinventing Nature? Responses to Postmodern Deconstruction*, Island Press 1995

⁶³ Fitzsimmons, quoted in Eliot, C., ‘The Legend of Order and Chaos: Communities and Early Community Ecology’ in deLaplante, K., Brown, B., Peacock, A., *Handbook of the Philosophy of Science. Volume 11: Philosophy of Ecology* (Elsevier 2010) at 68

⁶⁴ All three descriptions are taken from deLaplante, K. and Odenbaugh, J., ‘What Isn’t Wrong with Ecosystem Ecology’ in Skipper, R.A., C. Allen, R. Ankeny, C. F. Craver, L. Darden, G. M. Mikkelsen, and R. C. Richardson (eds) *Philosophy Across the Life Sciences* (Cambridge, MA: MIT Press, 2006); see also deLaplante, K., ‘Is Ecosystem Management a Postmodern Science?’ in Cuddington and Beisner 2005 (n. 61, where the same distinctions are made

⁶⁵ Golley, F.B., *A History of the Ecosystem Concept in Ecology: More than the Sum of its Parts*, New Haven: Yale University Press, 1993 at 3. Similarly Bell, A., ‘Non Human Nature and the Ecosystem Approach. The Limits of Anthropocentrism in Great Lakes Management’ 20:3 (2004) *Alternatives Journal*

ambivalence” of ecology,⁶⁶ which is manifested in its two main genealogies, or traditions. The first one, which he calls “imperial”, is expression of an anthropocentric, engineering vision of the world. The other, which he calls “arcadian”, draws from ecology a philosophical and ethical vision, traditionally aligned with the values of romanticism, holism and ecocentrism.

Other authors, referring to the specific context of ecosystem management, provide a more nuanced picture. Francis thus distinguishes between four major schools, which conceptualize ecosystems by way of different organizing metaphors: the industrial enterprise, the idea of community, a medical analogy, and a cosmological or Gaian metaphor.⁶⁷

The elements presented thus far highlight the ambiguities that the concept harbors. Indeed, some maintain that “the use of words with ambiguous and widely divergent definitions”⁶⁸ is a typical characteristic of the discourse of ecosystem management, echoing Grumbine’s concern that as a “slippery” concept, the ecosystem approach is susceptible to discursive capture by divergent and conflicting resource management and political (and academic) interests, in order to be directed towards their equally divergent and conflicting purposes.⁶⁹ And if Grumbine, in 1994, could discount the great variety of interpretations of the ecosystem approach in light of its novelty,⁷⁰ in 1999 discussions still regularly revealed that experts “often [held] widely divergent views of what [EA] entails”,⁷¹ despite the “general agreement that the ecosystem approach is of fundamental importance”.⁷² Moreover, as late as 2006, it was still generally recognized that “there is no universally agreed definition of an ecosystem approach, which is interpreted differently in different contexts”.⁷³

⁶⁶ Worster, D., *Nature's Economy: The Roots of Ecology*, San Francisco: Sierra Club Books, 1977

⁶⁷ Francis, G., ‘Ecosystem Management’ 33 (Spring 1993) *Natural Resources Journal*, 315 at 319-321

⁶⁸ Lackey, R. T., ‘Ecosystem Management: In Search of the Elusive Paradigm’ *Human Ecology Review*, 4:2, 1997/1998 at 108

⁶⁹ Grumbine 1997 (n. 39) at 41-42

⁷⁰ “Since the ecosystem approach is relatively new, and still unformed, this is not surprising”, Grumbine 1994 (n. 39) at 28

⁷¹ Maltby, E., ‘Some European Perspectives on the Ecosystem Approach’ in Korn et al. 1999 (n. 50) at 27

⁷² Maltby 1999 (n. 71) at 27

⁷³ Report on the work of the United Nations Open-ended Informal Consultative Process on Oceans and the Law of the Sea at its Seventh Meeting, (New York, 12–16 June 2006) (UN Doc. A/61/156, 17 July 2006) (ICP-7report) at para 6. See also para 42: “there [is] no internationally agreed single definition of an ecosystem approach”

The ambiguity and elusiveness of the concept is further compounded by fundamental ambiguities pertaining to other contested concepts central to the ecosystem approach, such as ecosystem health⁷⁴ and ecosystem integrity.⁷⁵

3. Part II: Ecosystem Approach between Ecocentrism and Anthropocentrism

The question raised in the introduction was whether and to which extent the ecosystem approach is one dimension of the process of trickling up briefly outlined, or whether the new language of ecosystems remains contained within a legal ordering still expression of more outdated ontologies of humanity and nature. Thus far it is clear that the ecosystem approach is being pulled in various directions, and that the “widespread support for the ecosystem approach masks a fundamental philosophical conflict between ecocentric and anthropocentric attitudes toward nature”.⁷⁶ It is time now for delineating more precisely a) the ecosystem approach as an *ecocentric* framework, thus as a critique of law’s anthropocentrism and b) the ecosystem approach as it is finding expression in International Law.

⁷⁴ “We all want healthy ecosystems, but “health” is largely in the eye of the beholder. Central to the health paradigm are value judgements”, Lackey 1997/1998 (n. 68) at 110. Further, “[w]ho stands opposed to health? Is there anyone who explicitly advocates ecosystem degradation and impoverishment? Such terms are so value laden that they should be avoided, or if used, be clearly defined [...]”, Lackey *ibid.* at 110. For a literature review highlighting such ambiguities and conceptual problems, see Lackey 2002 (n. 27)

⁷⁵ Francis 1993 (n. 67) describes at least 5 different understandings of the concept of ecosystem integrity (reporting from a workshop held in 1989 within the context of the Great Lakes ecosystem management plan). These interpretations showed clear tensions with one another and pervasive rhetorical ambiguity, and ranged from “deep reform” (requiring restructuring of human activities and organization to conform with biogeochemical cycles) to the more pragmatic understanding of slowing the rate of degradation of a resource. The environmental ethicist Holmes Rolston III captures the ambiguities of the concept of integrity in the following manner: “Perhaps we cannot be rigorous about integrity; the idea is soft, visionary, rhetorical, politically and emotionally correct, but philosophically and biologically suspect because it cannot be made operational. Integrity can mean anything you choose it to mean; it has begun to slip around as soon as we start to think about it”, Rolston, H., III, ‘Foreword’ in Westra, L., *An Environmental Proposal for Ethics: The Principle of Integrity* (Lanham: Rowman & Littlefield, 1994) at xii. For a literature review of the attempts to give meaning to ecological integrity see Fluker, S. ‘Ecological Integrity in Canada's National Parks: The False Promise of the Law’, 29 (2010) Windsor Review of Legal and Social Issues, 89, particularly at 92-99. Such review illustrates how two different approaches to integrity – natural ecological integrity and socio-ecological integrity – lead to rather different conclusions as regards the protection of nature (sustainable use the latter, preservation the former).

⁷⁶ Bell 2004 (n. 65) at 23

3.1 The Ecocentric Ecosystem Approach

The ecocentric version of the ecosystem approach offers a fundamental critique of the anthropocentrism of legal modernity. A shift from an environmental to an ecosystem perspective is “quite a radical shift” insofar as it “calls for a change in the entire field within which opportunities and problems are examined – a change from a view of environment in a political or people-oriented context to a view of politics in an “ecosystem context””.⁷⁷

It is conservation biologist Robert Grumbine who has provided the clearest articulation of the ecocentric⁷⁸ view in a now classic essay tacking stock of the emerging paradigm of ecosystem management. Grumbine maintains in fact that one of the principal goals of the ecosystem approach is that of accommodating human use and occupancy within ecosystem constraints. This implies that “[a]long with defining the ecosystem management approach as a new policy framework there appears to be a parallel [need] of redefining the fundamental role of humans in nature”.⁷⁹ Grumbine in this respect emphasizes how the key question is connected with the question of “sufficiency”, while “many green economy, stewardship, and “sustainability” models suffer from concentrating on efficient management instead of sufficient management”.⁸⁰ In this view ecosystem management is seen to require a fundamental re-orientation of human activities, in such a way that any human “use” must be contained within appropriate ecological limits. As Grumbine observes, ecosystem management is a response to resourcism, understood as “the belief held by many people in modern industrial societies that the world gains value only as nature is transformed into goods and services to meet human demands”.⁸¹ Resourcism is, then, another name for anthropocentrism.

This understanding of the ecosystem approach is echoed in the work of the various scholars, who link the emergence of ecosystem management with a paradigm shift, if not yet accomplished, in progress, or at the very least necessary. Keiter and Boyce observe in

⁷⁷ Vallentyne J.R., and Beeton, A.M., ‘The ‘Ecosystem’ Approach to Managing Human Uses and Abuses of Natural Resources in the Great Lakes Basin’ 15:1 (1988) *Environmental Conservation* 58 at 58

⁷⁸ Grumbine reflects more precisely what is called the biocentric view. For the purposes of this article however the distinction between ecocentric and biocentric is not especially relevant.

⁷⁹ Grumbine 1994 (n. 39) at 28

⁸⁰ Grumbine 1994 (n. 39) at 35

⁸¹ Grumbine 1994 (n. 39) at 34

fact that the “transition to ecosystem management manifests a willingness to accept nature largely on its own terms and to control incompatible human uses”.⁸² Goldstein suggests that “using ecology to redefine land management implies an ethical reorientation - the ecosystem is valued as an object of respect and admiration”.⁸³ Noss and Cooperrider go even further: “[b]iodiversity conservation ultimately requires a rejection of humanism or anthropocentrism [...] It requires a biocentric embrace of all life”.⁸⁴ The key element in all these accounts is that all authors are announcing - or advancing - a new paradigm, a new worldview which requires to re-evaluate fundamentally the relation between man and nature. In other words, a crucial move implicated and required by *this* ecosystem approach is the reconstruction and re-imagination of nature: the modern Cartesian worldview which considers nature as a passive resource base to be subjugated ought to be discarded, and the “fence” which has segregated humans from nature ought to be dismantled.⁸⁵ Moreover, all these accounts reflect a new ecological *gestalt*,⁸⁶ that is, a modal shift in the understanding of reality – away from the atomistic and towards the systemic and relational. Ecosystems are thus apprehended as wholes, and all participants are connected in a relational field comprised of places, processes, individuals and ecological communities. This shift has significant effects on law, since legal notions convey “a particular partitioning of the world”.⁸⁷ Moreover, “[t]he relationship between the world of natural objects and the world of legal objects is mediated, through language, by perceptions and representations of reality”.⁸⁸ A relational *gestalt* eludes easy accommodation within existing legal concepts and categories, resisting – fully or partially – simplistic binaries and designations (such as subject-object), which reflect the categories of an atomistic, and dualist, perception of the world.

⁸² Keiter, R, and Boyce, M. *The Greater Yellowstone Ecosystem: Redefining America's Wilderness Heritage* (Yale University Press, New Haven, Connecticut, 1994) at 404

⁸³ Goldstein, R ‘Can ecosystem management turn an administrative patchwork into a Greater Yellowstone Ecosystem?’ 8:2 (1992) *Northwest Environmental Journal*, 285

⁸⁴ Noss, R. F., and Cooperrider, A. *Saving Nature's legacy: Protecting and restoring biodiversity* (Defenders of Wildlife and Island Press, Washington, D.C., 1994) at 328

⁸⁵ Grumbine 1994 (n. 39) at 35

⁸⁶ The term *Gestalt* refers particularly to a theory of psychology which claims that the human brain perceives the world, and objects therein, holistically. In this sense, *Gestalt* promotes a concept of perception and of reality entirely inconsistent with the modern reductionist account. The *Gestalt* framework can be summarized thus: the whole is greater (and other) than the sum of its part. See Smith, B. (ed) *Foundations of Gestalt Theory* (Munich and Vienna: Philosophia Verlag, 1988)

⁸⁷ Tallacchini 2000 (n. 25) at 1093

⁸⁸ Smith 1997 as quoted in Tallacchini 2000 (n. 25) at 1092

Finally, where explicitly and where only implicitly, all these accounts suggest that legal subjectivity be attached to non-human entities, in light of the “goal of protecting ecological integrity”, considering that “owls and gentians have [also] evolutionary needs as do humans”.⁸⁹ There is a clear echo of the seminal article of Christopher Stone discussing this theme,⁹⁰ from which Grumbine in particular draws direct inspiration.

3.2 The Ecosystem Approach in International Law

As already mentioned in the introduction, Law is increasingly seen as contributing to the construction, maintenance and reproduction of an anthropocentric worldview, in many ways responsible for the ongoing depredations on nature and unfolding ecological crises. The ecocentric vision of the ecosystem approach is entirely in line then with the urgent calls for a radical re-orientation of the entire legal system in the sense of a “radical, collective worldview-shift” towards a “strong substantively meaningful commitment to ecological sustainability”.⁹¹ Against this backdrop, and also considering the mentioned process of trickling up of a more ecocentric vision within the structures of international environmental law, we can now turn to an assessment of how the ecosystem approach is finding expression in international law. The assessment will be limited to the area of biodiversity conservation (and, relatedly, living resources management, fisheries in particular). A treatment of the ecosystem approach as it has developed within the context of international freshwater law remains outside the scope of this article.⁹² Some reference however will be made to it as relevant.

⁸⁹ Grumbine 1994 (n. 39) at 35

⁹⁰ Stone, C D., ‘Should Trees have Standing? Toward Legal Rights for Natural Objects’ 45 (1972) *Southern California Law Review*, 450. See also Stone, C. D., ‘Should Trees Have Standing? Revisited: How Far Will Law and Morals Reach? A Pluralist Perspective’ 59 (1985) *California Law Review* 1 and Stone 2010 (n. 1). See also Grear, A. (ed), *Should Trees Have Standing? 40 Years on* (Edward Elgar, 2012)

⁹¹ Grear, A., ‘Multi-Level governance for Sustainability: Reflections from a Fractured Discourse- a Response to Bosselmann’, in Bosselmann, K. and Grear, A. (eds) *New Zealand and the EU: Contested Futures: Sustainability, Governance and International Human Rights* (Europe-New Zealand Research Series, vol. 5.1, Auckland: University of Auckland, 2010) at 73

⁹² The first outline of an ecosystem approach to transboundary water management is to be found in the context of the International Joint Commission of United States and Canada, particularly as regards the 1972 Great Lakes Water Quality Agreement. The need for an ecosystem approach was outlined in a 1978 report of the Great Lakes Research Advisory Board, in which it was made clear that simply relying on “knowledge of the chemical and physical water quality” was not enough. The planning and management of “such a priceless resource as the Great Lakes requires [...] understanding of the total ecosystem and the diverse interactions which occur within its chemical, physical, biological and societal components.” The board then presented the case for a shift from a water quality objectives approach – the approach taken in the 1972 agreement - to an ecosystem approach. Great Lakes Research Advisory Board, *The Ecosystem*

3.2.1 Early on: marine living resources

Within the context of biodiversity and marine living resources, the ecosystem approach has developed along three tracks.⁹³ The first explicit utilization of the ecosystem approach as primary framework of living resources management occurred within the context of the Antarctic Treaty System, and precisely in the Convention on the Conservation of Antarctic Marine Living Resources (CCAMLR), adopted in 1980.⁹⁴ The scope of the Convention embraces the entire Antarctic marine ecosystem, understood as “the complex of relationships of Antarctic marine living resources with each other and with their physical environment”.⁹⁵ One of its chief conservation principles is the “maintenance of the ecological relationships between harvested, dependent and related populations of Antarctic marine living resources”.⁹⁶ In its preamble CCAMLR makes also reference to the concept of “ecosystem integrity”, albeit without providing a definition.⁹⁷ However, some clarity may be evinced by one of CCAMLR’s objectives, namely the “prevention of changes or minimisation of the risk of changes in the marine ecosystem which are not potentially reversible over two or three decades”.⁹⁸

Approach. Scope and Implications of an Ecosystem Approach to Transboundary Problems in the Great Lakes Basin (Special Report to the International Joint Commission, Windsor: Ontario, Canada, July 1978) at 2. For an assessment of the ecosystem approach within the context of the Great Lakes see the special issue *Making Sense Of The Ecosystem Approach: Lessons From The Great Lakes*, 20:3 (1994) *Alternatives Journal*. A seminal article on the potential implications of fully implementing an ecosystem approach in international water law is Brunnée, J. and Toope, S.J., ‘Environmental Security and Freshwater Resources: A Case for International Ecosystem Law’, 5 (1994) *Yearbook of International Environmental Law*, 41. For a current review of the ecosystem approach in freshwater law see McIntyre, O., ‘The Emergence of an “Ecosystem Approach” to the Protection of International Watercourses Under International Law’, 13:1 (2004) *RECIEL*, 1.

⁹³ Turrell, in reviewing the policy basis of the ecosystem approach to fisheries, identifies what he calls “three strands” of ocean governance, the UNCLOS process, the UNCED process and the FAO process, Turrell, W. R., *The Policy Basis of the “Ecosystem Approach” to Fisheries Management*, (EuroGOOS Publication n. 21, 2004). This same analytical division can be applied more generally to biodiversity, considering that the Convention on Biological Diversity is an offshoot of the UNCED process, and that fisheries management has developed both within the UNCLOS and FAO context.

⁹⁴ Convention on the Conservation of Antarctic Marine Living Resources (CCAMLR), done at Canberra, 20 May 1980; in force on 7 April 1982, (1980) 19 *International Legal Materials* 841

⁹⁵ CCAMLR, article I(2).

⁹⁶ CCAMLR article II(3)(b)

⁹⁷ CCAMLR, Preamble, first recital: “recognising the importance of [...] protecting the integrity of the ecosystem of the seas surrounding Antarctica”.

⁹⁸ See CCAMLR article II(3)(b), where among the objectives appears

In short, CCAMLR incorporates basic principles of ecosystem ecology, and opens for conservation measures only indirectly addressing the harvested species, hence expanding regulatory focus on various components of the marine ecosystem,⁹⁹ as a consequence of the recognition of the vital importance of ecosystem interrelationships.¹⁰⁰ CCAMLR has thus formally introduced the idea of “associated species”,¹⁰¹ which had been however part of the conceptual toolset available to marine living resources diplomacy since at least 1974, when it was introduced during the negotiation of the 1982 United Nations Conventions of the Law of the Sea.¹⁰²

All in all, CCAMLR is considered to provide an exemplary model of ecosystem approach to conservation and management of living resources,¹⁰³ particularly as the main principles of an ecosystem approach are “embedded” *ab initio* within its text, while the case otherwise has been that of transitioning from an original single-species focus to an ecosystem approach.¹⁰⁴

⁹⁹ FAO calls the traditional resource management model “target resource-oriented management”, FAO 2003 (n. 53) at 11ff.

¹⁰⁰ See CCAMLR article IX(2)(i), which details the function of the Commission established under CCAMLR, and its role in giving effect to the Convention’s objective and principles, by, inter alia, “taking of such other conservation measures as the Commission considers necessary for the fulfilment of the objective of this Convention, including measures concerning the effects of harvesting and associated activities on components of the marine ecosystem other than the harvested populations”

¹⁰¹ CCAMLR speaks respectively of “associated and related populations” in article II(3)(b) and of “associated species” in article XI.

¹⁰² The concept of “associated and dependent species” for the management of living marine resources was originally introduced within the context of UNCLOS negotiation in 1974 by the United States of America, UN/DOC/A/CONF.62/C.21L.47 (1974), article 12, III Off. Rec. 222, 223 (U.S.A.). See also Article 61 - Conservation of the Living Resources (II) (594-611) in Nordquist, M.H., Nandan, S. and Rosenne, S., *United Nations Convention on the Law of the Sea 1982 Commentary online* (Brill-Nijhoff, 2013) at 601

¹⁰³ Thus for example Redgwell, C., ‘Protection of Ecosystems under International Law: Lessons from Antarctica’ in Boyle, A. and Freestone, D. (eds) *International Law and Sustainable Development* (Oxford: Oxford University Press, 1999); Clark, B. and Hemmings, A., ‘Problems and Prospects for the Convention on the Conservation of Antarctic Marine Living Resources Twenty Years On’ 4 (2001) *Journal of International Wildlife Law & Policy*; ; Ramm, D.C., ‘Managing Antarctic marine living resources: The CCAMLR approach’, 19:3 (2004) *International Journal of Marine and Coastal Law*. But see Andersen, S., ‘The Convention for the Conservation of the Antarctic Marine Living Resources (CCAMLR): Improving Procedures but Lacking Results’ in Miles, E.L., Andreeren, S., Carlin, E.M., Skjærseth, J.B., Underdal, A. and Wettestad, J. (eds) *Environmental Regime Effectiveness: Confronting Theory with Evidence* (Cambridge, Massachusetts: MIT Press 2002), which considers the regime to be ineffective when it comes to its outcome and impact

¹⁰⁴ Thus for example Constable, A.J., ‘Lessons from CCAMLR on the implementation of the ecosystem approach to managing fisheries’ 12:2 (2011) *Fish and Fisheries Special Issue: Implementing Ecosystem-Based Fisheries Management*, 138 at 138

While CCAMLR may be considered a peculiar case, given the particular geo-political and legal circumstances of Antarctica,¹⁰⁵ UNCLOS is also considered by some doctrine to have incorporated – at least implicitly - an ecosystem approach.¹⁰⁶ This is linked to the inclusive language used to qualify States duties to protect the marine environment, where the term environment includes “rare and fragile ecosystems as well as habitat of depleted, threatened, or endangered species and other forms of marine life”.¹⁰⁷ Indeed Belski has claimed that UNCLOS “mandates the “ecosystem approach””.¹⁰⁸

Having provided a very brief overview of the earlier implementation of the ecosystem approach in international law relating to the conservation and use of (marine) biodiversity, it is now time to look at how the ecosystem approach has been integrated within the broader narrative of sustainable development, which in many ways has colonized the field of environmental law and politics very early, as we shall see.

3.2.2 The Ecosystem approach and the sustainable development narrative

The ecosystem approach has been from very early on running parallel to what would become a central narrative in international law and politics: sustainable development. This is particularly relevant in the context of biodiversity and natural resources management, as the holistic orientation of the ecosystem approach, as we shall see, has been re-oriented, as it were, so as to fit within the broader normative paradigm dominated

¹⁰⁵ And we still need to be cognizant of the fact that the success of CCAMLR in implementing the ecosystem approach has been limited, see Constable 2011 (n. 104) and Fabra and Gascón 2008 (n. 40) (which speaks more mildly of difficulties). Both papers link the problems mostly with jurisdictional limitations and IUU fishing.

¹⁰⁶ Fabra and Gascon consider the ecosystem approach “implicit” in both UNCLOS and FSA (as well as in the FAO Code of Conduct on Responsible Fisheries), Fabra and Gascón 2008 (n. 40) at 571

¹⁰⁷ United Nations Convention on the Law of the Sea, Montego Bay, 10 December 1982, entered into force on 16 November 1994, (1982) 21 International Legal Materials 1261 (UNCLOS), article 194(5). Thus already Belski, M. H., ‘Using Legal Principles to Promote the “Health” of an Ecosystem’ 3 (1995/1996) *Tulsa Journal of Comparative and International Law*, 183. Belski maintains that the ecosystem-base management model evolved from “preferred policy to binding custom [as] demonstrated by the 1982 United States Convention on the Law of the Sea”, which requires all Parties to “take appropriate actions to preserve and protect the marine environment” (at 194 referring to art. 192, 197, 207, 210 of UNCLOS) and require Parties to “manage their resources based on the interdependence of species” (at 195, referring to art. 61, 65, 66, 67 of UNCLOS)

¹⁰⁸ Belski 1995-1996 (n. 107) at 196. See however Hey, E., ‘The Persistence of a Concept: Maximum Sustainable Yield’ 27:4 (2012) *The International Journal of Marine and Coastal Law*, 763, where the author contrasts as incompatible the concept of maximum sustainable yield, a central concept in UNCLOS, and the new model of ecosystem approach to fisheries.

– “quasi-constitutionally” – by the concept of sustainable development. This concept – albeit in itself also contested – has developed within the context of international law with a clear and evident anthropocentric orientation.¹⁰⁹ The foundational events and documents of international environmental law illustrate how the anthropocentric vision is the prevailing, hegemonic approach to environmental protection. The 1972 Stockholm Conference contains this orientation already in its title – Conference on the *Human Environment*¹¹⁰ - and then explicitly grounds itself in an anthropocentric worldview to the extent that Man is the barycenter of the entire Declaration,¹¹¹ and all references to ecosystems and the earth are functional to the well-being of “present and future generations” (principles 1 and 2) or “all mankind” (principle 5), or to the production of resources (principle 3). Principle 21, finally, reiterates the principles that exploitation of resources is a sovereign right of States, its only limitations being “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”. Already in Stockholm the need for an “efficient synthesis”¹¹² of environmental and developmental concerns was an important element of the debate.¹¹³

The Rio Declaration, the second founding document issued at the end of the Conference on Environment and Development held in Rio de Janeiro, Brazil, in 1992, reiterates with even more force this orientation. In fact, Principle 1 states unequivocally that “Human beings are at the centre of concerns for sustainable development”.¹¹⁴ The Rio Declaration in particular enshrines the concept of sustainable development as organizing principle

¹⁰⁹ Thus for example Gillespie, A., *The Illusion of Progress: Unsustainable Development in International Law and Policy* (London: Earthscan, 200)

¹¹⁰ Emphasis mine

¹¹¹ The Declaration proceeds from the consideration of a need to identify a “common outlook and for common principles to inspire and guide the peoples of the world in the preservation and enhancement of the human environment”, Declaration of the United Nations Conference on the Human Environment, U.N. Doc. A/Conf.48/14/Rev. 1 (1973), incipit

¹¹² See Leary, D. and Pisupati, B., *The Future and International Environmental Law* (Tokyo: United Nations University, 2010) at 5 which quote from the Founex Report, in which this efficient synthesis was theorized and promoted, see de Almeida, M.O., *Environment and Development: The Founex Report on Development and Environment* (Carnegie Endowment for International Peace, 1972)

¹¹³ Particularly fueled by the concerns of developing countries, see Bernstein 2001 (n. 33) at 32ff.

¹¹⁴ The second sentence states that human beings also “are entitled to a healthy and productive life in harmony with nature”, Rio Declaration On Environment And Development, U.N. Doc. A/Conf.151/26 (Vol. I), Principle 1

and as ideological narrative for the entire environmental legal landscape.¹¹⁵ Sustainable development, as famously defined by the Brundtland Commission, is “development that meets the needs of the present without compromising the ability of future generations to meet their own needs”.¹¹⁶ With its focus on distributional concerns between present and future generations, it has a clear anthropocentric focus. Such focus is also candidly expressed elsewhere in the report of the Commission, with regards to “the exploitation of resources, the direction of investments, the orientation of technological development and institutional change”, all elements that should “enhance both current and future potential to meet human needs and aspirations”.¹¹⁷

Moreover, this prevailing idea of sustainable development exudes economic and technological optimism. Particularly in relation to the normativity of limits explored above, while “[t]he concept of sustainable development does imply limits”, such limits are nevertheless “not absolute [...] but limitations imposed by the present state of technology and social organization on environmental resources and by the ability of the biosphere to absorb the effects of human activities”.¹¹⁸

Finally, sustainable development is throughout the Brundtland Report discussed as a strategy aimed at securing “new era of economic growth”.¹¹⁹ This is really the conceptual basis for the now mainstreaming ideology of a “green economy”. Sustainable growth provides thus a normative horizon for environmental protection in general, and for the ecosystem approach in particular, as will be more evident from the next section.¹²⁰

3.2.3 The Ecosystem approach as a tool

It is important to note that the relationship between the ecosystem approach and the broader principle – and narrative – of sustainable development takes a particular form: the ecosystem approach is often described in terms of a *tool* to achieve sustainable

¹¹⁵ In its broadest sense. See Lowe 2000 (n. 22), which constructs the international legal space as a field open to the influence of cultural narratives and political contestations through the notion of interstitial norms, of which the concept of sustainable development is a primary example.

¹¹⁶ World Commission of Environmental and Development, *Our Common Future: Report of the World Commission on Environment and Development*, A/42/427 at 24, (hereinafter WCED)

¹¹⁷ WCED (n. 116), Chapter 2, section I, para 15

¹¹⁸ WCED (n. 116) at 24

¹¹⁹ WCED (n. 116) at 28 (but the reference is used repeatedly throughout the report)

¹²⁰ Similarly, albeit within the particular context of the Great Lakes, Bell 2004 (n. 64)

development. This is evident in the Convention on Biological Diversity, as also reinforced by the Plan of Implementation of the World Summit on Sustainable Development, where the ecosystem approach, in the context of biodiversity protection,¹²¹ is presented as one of the key tools to achieve sustainable development.¹²² Even more explicit is the International Council for the Exploration of the Seas, which states that “[t]he Ecosystem Approach is *embedded* in the concept of sustainable development, which requires that the needs of future generations are not compromised by the actions of people today. The Ecosystem Approach puts emphasis on a management regime that maintains the health of the ecosystem alongside appropriate human use of the marine environment, for the benefit of current and future generations”.¹²³ Moreover, the converse seems also to be true: “sustainable forest management, as developed within the framework established by the Rio Forest Principles, can be considered as a means of applying the ecosystem approach to forests”.¹²⁴ Particularly explicit is the European Commission:¹²⁵ “[EA] is an instrument to pursue sustainable development in its three dimensions”.¹²⁶ A report of the Secretary General to the General Assembly of the United Nations at its fifty-ninth session, however, provides the clearest evidence of such deep linkage: “The ecosystem approach is the backbone of sustainable development”.¹²⁷ And in many ways this was also evident in CCAMLR, where conservation includes “rational use”,¹²⁸ a pivotal concept whose core anthropocentric implications are replicated throughout the international environmental legal landscape. Originally conceptualized by Gifford Pinchot in the 1920’s,¹²⁹ it emerged in international law

¹²¹ Plan of Implementation of the World Summit on Sustainable Development, para 44 begins thus: “Biodiversity, which plays a critical role in overall sustainable development and poverty eradication...”

¹²² Plan of Implementation of the World Summit on Sustainable Development, para 44(e),

¹²³ ICES, *Guidance on the Application of the Ecosystem Approach to Management of Human Activities in the European Marine Environment*, (ICES Cooperative Research Report n. 273, 2005) where at 4, para 4.1, emphases mine.

¹²⁴ Decision VII/11 of the Conference of the Parties to the Convention on Biological Diversity, at its Seventh Meeting, 9 - 20 February 2004 - Kuala Lumpur, Malaysia, UNEP/CBD/COP/7/21

¹²⁵ For the purposes of this article included under the rubric of international law

¹²⁶ European Commission Communication. *The role of the CFP in implementing an ecosystem approach to marine management*. COM(2008)187, Brussels 11.04.2008, at 3

¹²⁷ Oceans and the law of the sea, Report of the Secretary-General, Addendum UN Doc A/59/62/Add.1 18, August 2004 Para 244

¹²⁸ CCAMLR Article II(2): “For the purposes of this Convention, the term ‘conservation’ includes rational use”

¹²⁹ Gifford Pinchot has been a crucial historical figure in the conservation movement in the United States. Pinchot was the first Chief of the United States Forest Service, and championed the conservation of

already in 1960's,¹³⁰ and it finds today expression in a number of similar formulations such as wise use,¹³¹ rational management¹³² and sustainable use.¹³³

Understood in these terms, the ecosystem approach is deployed primarily, if not exclusively, in a methodological sense.

3.2.4 An entirely anthropocentric ecosystem approach?

The measure of the effects of this insertion of the ecosystem approach within the pre-existing ideological and normative narrative of sustainable development is still not sufficient to assess whether the ecosystem approach is entirely subsumed under an anthropocentric worldview, or whether it still resists permanent closure. Reviewing a number of definitions of the ecosystem approach, will provide further indications.

A good starting point is the definition given to the ecosystem approach within the context of the Convention of Biological Diversity (CBD): “a strategy for the integrated management of land, water and living resources that promotes conservation and

resources through management and efficient and rational use, as evident by this quotation: “Forestry is the knowledge of the forest. In particular, it is the art of handling the forest so that it will render whatever service is required of it without being impoverished or destroyed. For example, a forest may be handled so as to produce saw logs, telegraph poles, barrel hoops, firewood, tan bark, or turpentine. The main purpose of its treatment may be to prevent the washing of soil, to regulate the flow of streams, to support cattle or sheep, or it may be handled so as to supply a wide range and combination of uses. Forestry is the art of producing from the forest whatever it can yield for the service of man”, Pinchot, G., *The Training of a Forester*, Philadelphia, J. B. Lippincot Co. , 1914 at 13

¹³⁰ See for example the negotiating history of the Convention on Wetlands of International Importance Especially as Waterfowl Habitat (Ramsar Convention), concluded at Ramsar, Iran, on 2 February 1971, (1972) International Legal Materials 11, 969, built largely around the concept of conservation as wise use, see for example Ramsar Convention Secretariat, *Ramsar's Liquid Assets. 40 years of the Convention on Wetlands*, Gland, Switzerland, 2011. Within the context of UNESCO, see UNESCO, *Use and Conservation of the Biosphere*, Proceedings of the Intergovernmental Conference of Experts on the Scientific Basis for Rational Use and Conservation of the Resources of the Biosphere Paris, 4-13 September 1968, Liege: 1970 by the United Nations Educational, Scientific and Cultural Organization 1970

¹³¹ The Ramsar Convention speaks of wise use of “migratory stocks of waterfowl” (articles 2) and of “wetlands” (article 3)

¹³² UNCLOS speaks of “optimum utilization” (e.g. article 62) and “rational management” (e.g. article 67) of living resources

¹³³ Sustainable use is one of the three main objectives of the Convention on Biological Diversity: “The objectives of this Convention, to be pursued in accordance with its relevant provisions, are the conservation of biological diversity. the sustainable use of its components and the fair and equitable sharing of the benefits arising out of the utilization of genetic resources [...]” (article 1)

sustainable use in an equitable way”.¹³⁴ This definition is *prima facie* a holistic (“integrated”) transposition of article 8. The ecosystem approach is first understood in relation to ecosystems as objective entities. It is in this respect important to recall how the CBD contains the only reference to the intrinsic value of nature in a binding international legal instrument, albeit “only” in its preamble.¹³⁵ Yet it is deployed as a methodology – a framework for action – aimed at managing natural resources for the long-term benefit of humanity, and it remains entangled in a neoliberal narrative of ecosystem goods and services.¹³⁶ The ecosystem approach within the context of the CBD offers then a somewhat nuanced image, where conflicting (world)views are represented at the same time.¹³⁷

Other definitions offer further perspectives, and clearer evidence of the anthropocentric orientation of the ecosystem approach within the context of international legal narrative, as represented by both formal legal texts and softer documents such as policy documents, white papers or other institutional documentation.

The OSPAR Commission, for example, states that “the essence of the ecosystem approach is to allow sustainable exploitation of natural resources while maintaining the quality, structure and functioning of marine ecosystems”.¹³⁸ This outlook – rather anthropocentric - is echoed by another candid phrasing of an OSPAR publication: “[t]he Ecosystem Approach puts people and their natural resource use practices at the centre of decision-making”.¹³⁹ Further, within the context of the European Union, the European

¹³⁴ Decision V/6 by the Conference of the Parties to the Convention of Biological Diversity at its Fifth meeting, Nairobi, 15-26 May 2000, UNEP/COP/5/23

¹³⁵ This shows what both Emmenegger and Tschentscher 1994 (n. 13) at footnote 16 and Bosselmann 2008 (n. 1), at 92-93 observe, that in international environmental law there coexist different value orientations within the same normative framework

¹³⁶ The concept of ecosystem services, formalized in UNEP, *Millennium Ecosystem Assessment* (Washington, D.C.: Island Press, 2005), has long been discussed in the economic literature under the rubric “valuation of nature”. This approach has now become mainstream within the context of the Convention on Biological Diversity, through mechanisms such as the The Economics of Ecosystems and Biodiversity project, <http://www.teebweb.org>. Nature is thus methodologically reduced to a set of discrete services, which can be then assigned dollar value in order to – allegedly – enhance their visibility and increase their protection. This is in the opinion of the author an utterly anthropocentric approach to nature as a resource

¹³⁷ This is in a way not surprising, as it is not uncommon that international legal instruments present different value basis within the same framework, or within the same provisions, as often remarked by the doctrine; see in particular. In this sense in particular Emmenegger and Tschentscher 1994 (n. 13), but thus also Bosselmann, 2008 (n. 1)

¹³⁸ OSPAR Commission, *Quality Status Report 2010*, OSPAR, 2010 at 9

¹³⁹ OSPAR Commission, *Evaluation of the OSPAR system of Ecological Quality Objectives for the North Sea (update 2010)*, OSPAR, 2010 at 5

Commission states that “[a]n ecosystem approach to fisheries management is about ensuring goods and services from living aquatic resources for present and future generations [...s]uch fishery management will strive to ensure that benefits [...] are high while direct and indirect impacts [...] on marine ecosystems are low”.¹⁴⁰ The Commission recalls explicitly a prior FAO definition, which reads as follows: “the purpose of an ecosystem approach to fisheries is to plan, develop and manage fisheries in a manner that addresses the multiple needs and desires of societies, without jeopardizing the options for future generations to benefit from the full range of goods and services provided by marine ecosystems”.¹⁴¹ FAO in particular is very explicit in regarding the ecosystem approach (to fisheries) as not entailing a paradigm shift, but as rather being entirely consistent with – and not a replacement for – traditional fisheries management practices.¹⁴²

The International Council for the Exploration of the Seas defines finally the ecosystem approach as “a comprehensive integrated management of human activities based on the best available scientific knowledge about the ecosystem and its dynamics, in order to identify and take action on influences which are critical to the *health* of the marine ecosystems, thereby achieving *sustainable use of ecosystem goods and services* and maintenance of ecosystem *integrity*”.¹⁴³ Besides the evident ultimate goal of maintaining the provision of ecosystem goods and services at levels useful to human utility, the definition refers to both ecosystem health (necessary to establish exploitation thresholds) and integrity (a state to achieve and/or maintain): while both seem to point towards an ecocentric perspective, both terms are, as we have seen, elusive and contested, hence providing no necessarily firm ground on which to stand. As such, those references may only operate as rhetorical devices.¹⁴⁴

¹⁴⁰ European Commission Communication. *The role of the CFP in implementing an ecosystem approach to marine management*. COM(2008)187, Brussel 11.04.2008, at 3

¹⁴¹ FAO 2003 (n. 54) at 14.

¹⁴² FAO 2003 (n. 54)

¹⁴³ ICES 2005 (n. 123) at 4. Emphases mine

¹⁴⁴ Ecological health and integrity are measured by means of ecological quality objectives (EQOs). There is no space to address EQOs in this article. Suffice to say that are “metrics or indicators that relate to ecosystem properties and human use”, and function as proxies, or as intermediate interpretive layers at the crossroads of uncertain knowledge, scientific methodologies, policy objectives, political and scientific expediency and human desires, Heslenfeld, P. and Enserink E. L., ‘OSPAR Ecological Quality Objectives: the utility of health indicators for the North Sea’ 65:8 (2008) ICES Journal of Marine Science, 1392 at

All definitions - while acknowledging a “paradigm of limits”¹⁴⁵ - seem to reproduce the orientation and goals of sustainable development,¹⁴⁶ whose idea of limits is relative, and whose anthropocentrism is, as we have seen, evident. Moreover, the key element which emerges from all definitions is that of maintaining natural productivity, and the streams of ecosystem goods and services necessary for the fulfillment of human needs and desires. Nature is conceptualized as a resource, as a service provider.

4. Some Conclusions

This article has shown how the ecosystem approach is a contested concept. While for some this does not represent a major obstacle to the implementation of its underlying principles,¹⁴⁷ competing and conflicting understandings of the concept may lead to important differences, both as regards goals and as regards modalities and modes of governance. This is particularly true if seen from the point of view outlined in the introduction, of an urgent need to re-orient law in a radical ecocentric direction. In this respect it is important to remember the double role of law as both product and producer of a particular worldview.¹⁴⁸ Law is in fact a particular “cultural artefact”,¹⁴⁹ yet as part

1393, and that – at least in the context of OSPAR, indicators quality suffered due to political commitments (or lack thereof), scientific difficulties and operational opportunism, as indicators were chosen “that were already monitored by most North Sea countries and, where possible, objectives that had already been accepted by OSPAR or otherwise agreed internationally [...] Although this enhanced their acceptability to policy-makers, less attention was given to more basic criteria for selecting specific indicators or objectives”, Heslenfeld and Enserink *ibid.* at 1396

¹⁴⁵ “An ecosystem approach therefore continues from the earlier “paradigm of limits” of traditional fisheries management focusing on the target resource. However, the concept of “limits” no longer considers only the impacts on a target population, but rather the fact that all ecosystems have limits which, when exceeded, can result in major ecosystem change” European Commission Communication. *The role of the CFP in implementing an ecosystem approach to marine management*. COM(2008)187, Brussel 11.04.2008 at 3.

¹⁴⁶ A similar analysis, within the particular context of the Great Lakes, is provided by Anne Bell, according to which the ecosystem approach falls “squarely within a sustainable development framework”, Bell 2004 (n. 65) at 22

¹⁴⁷ Report on the work of the United Nations Open-ended Informal Consultative Process on Oceans and the Law of the Sea at its Seventh Meeting, (New York, 12–16 June 2006) (UN Doc. A/61/156, 17 July 2006) (ICP-7report) at para 42. But thus also Long 2012 (n. 35) at 421

¹⁴⁸ As Clifford Geertz argues, Law produces a specific vision of a community, and not just an echo of it, Geertz, C. *Local Knowledge: Further Essays in Interpretive Anthropology* (London: Fontana Press, 1983)

¹⁴⁹ Petersen, H., *Gender and Nature in Comparative Legal Cultures*, in Nelken, D. (ed) *Comparing Legal Cultures*, Dartmouth: Aldershot 1997 at 142

of a ‘distinctive way of imagining the real’,¹⁵⁰ law produces and shapes the world in particular ways. In this sense, law is not merely descriptive, but also *performative*.¹⁵¹

The contested understandings of the overall horizon of the ecosystem approach are widely represented in the literature, offering opposing views at times of what the ecosystem approach is, and ought to be. But even where there is a certain convergence of terminologies and characteristics, ambiguities and spaces open to interpretive contestation remain significant, also as regards other central concepts within the context of the ecosystem approach, which couldn’t be addressed directly in this article, but which remain in themselves open to contestation, such as the mentioned notions of ecosystem health and ecosystem integrity.

The crucial element of this contestation, to link back to the premises of this article, is represented by the value orientation implicit in different views of the ecosystem approach. One view is ecocentric, and champions a fundamental reorientation of human’s role within nature. As we may recall, the ecosystem approach entails for some the need to re-imagine natural entities as subject of rights rather than mere objects. The other view is firmly located within the narrative horizon of sustainable development, and aims at optimizing economic performance through the employment of a number of econometric tools and market instruments in line with neoliberal, market-oriented environmental policy approaches, currently subsumed under the mainstream framework of the “green economy”.¹⁵² This latter is decidedly the prevailing normative narrative within which environmental policy is developed. In this sense the ecosystem approach is deployed mostly as a methodology, and is fully located within an ideological horizon which still considers nature as a resource to be exploited for the benefits of humanity, as evident for example in the language of ecosystem goods and services.

¹⁵⁰ Geertz 1983 (n. 148) at 184

¹⁵¹ Thus, Grzegorzczuk, C. ‘Le Concept de Bien Juridique: l’Impossible Définition?’ 24 (1979) Archives de Philosophie du Droit, 259

¹⁵² As epitomized by The Economics of Ecosystems and Biodiversity project, <http://www.teebweb.org>, and by the recent Rio+20 Global Conference, one of whose two main themes was, in fact, “Green economy in the context of sustainable development and poverty eradication”, see United Nations General Assembly Resolution 66/288 adopted by on July, 27 2012, “The Future We Want”, UN.DOC/A/RES/66/288, Section III, para 56ff. In general of the alignment of the ecosystem approach within the context of the green economy see a number of UNEP publications, and in particular

A legitimate question is then whether the ecosystem approach entails little more than the re-structuring of capitalist accumulation in ecological terms.¹⁵³ Bruce Pardy in this respect maintains that the ecosystem approach is “a rearguard action whose prevailing function is to minimize the rate of ecological decline while facilitating business as usual as much as possible”¹⁵⁴; its mandate, moreover, is “to measure, control and change ecosystems to produce the most desirable environment in human terms. Sometimes this means preserving particular ecosystems, but more often it does not. Ecosystem management is a utilitarian approach in which human ends define what kind of “nature” managers will choose to make”.¹⁵⁵

Yet the ecosystem approach integrates within its developing framework some important elements which carry some potential for an ecocentric extension of the boundaries of international law. As one example of this, within the context of the ecosystem approach humans are considered no longer apart from, but immersed in, nature.¹⁵⁶ The ecosystem approach then, even within the narrative and discourse of international law, provides some traction for dismantling the “fence” of which Grumbine talks about. In this sense, it may help de-construct the modern construction of nature as Other, which entails an exclusively dichotomous understanding of nature, as either an object of control – subject to property rights – or as “wilderness to be preserved apart from human society”.¹⁵⁷ However, this in itself does not provide any guarantees, and is by some seen as

¹⁵³ What Matthew Paterson calls “ecological regimes of accumulation”, Paterson, M., ‘Legitimation and Accumulation in Climate Change Governance’, 15:3 (2010) *New Political Economy*, 345 at 345

¹⁵⁴ Pardy, B., ‘Ecosystem Management in Question: A Reply to Ruhl’ 23 (2006) *Pace Environmental Law Review*, 209 at 216.

¹⁵⁵ Pardy, B., ‘Changing Nature: The Myth of the Inevitability of Ecosystem Management’ 20 (2003) *Pace Environmental Law Review*, 675 at 675

¹⁵⁶ See, for example, Decision V/6 by the Conference of the Parties to the Convention of Biological Diversity at its Fifth meeting, Nairobi, 15-26 May 2000, UNEP/COP/5/23, Annex, Section A (Description of the ecosystem approach), para 2: “an ecosystem approach [...] recognizes that humans, with their cultural diversity, are an integral component of many ecosystems”

¹⁵⁷ Godden 2000 (n. 8) at 2. Mark Hasley suggests a similar dichotomy in more colourful terms: law, according to Hasley, operates as a “dividing line” between “the sacred and the abject”; yet such “islands of wildness [...] which law names and places to one side, are conceivable only on the basis of an ongoing and generalized ecological violence”, Hasley, M., ‘Majesty and Monstrosity. Deleuze and the Defence of Nature’ in Philippopoulos-Mihalopoulos, A. (ed) *Law and Ecology. New Environmental Foundations* (Routledge Glasshouse, 2011) at 218-219

potentially disastrous, insofar as it may entail a perverse reconfiguration of the role and legal framework of protected areas in the direction of permanent degradation.¹⁵⁸

By way of concluding, it is ultimately important to remain cognizant of the fact that such contradictory views, such ambivalence and ambiguity, such contestation over unstable semantic fields, may be an endemic feature of the international post-modern order.¹⁵⁹ In this light, the ecosystem approach is still very much in the making. Whether or not it will eventually entail a paradigmatic shift in international environmental law in the sense implicated by its ecocentric understanding – despite the clear and ongoing attempts at giving it a particular permanent closure – remains an open question.

¹⁵⁸ Locke and Dearden for example view the deployment of the conceptual framework of “humans in nature” as providing space for the introduction of pervasive management of nature legitimated by a rhetoric of conservation, ecosystem management and sustainable development. Indeed they point out how “under the new categories and supported by the ‘new paradigm’ (i.e. humans in nature), protected areas are being recast as tools for social planning and income generation”. They claim that this is already evident in Canada, within the context of forest management: “Lower levels of ‘protection’, if sanctioned as ‘protected areas’, will become the lowest common denominator to which governments default when creating new ‘protected areas’. In Canada, industry is already using these weakened IUCN standards to serve its own purposes”, Locke, H. and Dearden, P. ‘Rethinking Protected Area Categories and the New Paradigm’ 32:1 (2010) *Environmental Conservation*, 1 at 1, 6

¹⁵⁹ In this sense Kuokkanen, T. *International law and the environment: variations on a theme* (The Hague: Kluwer Law International, 2002) at 237