Carrots without Sticks? New Financial Mechanisms for Global Environmental Agreements*

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Environmental law has been described as "a cutting-edge laboratory of international law"[1] — a metaphor which somehow casts environmental lawyers in the unenviable role of the alchemist who is impatiently expected to find cheap ways of making gold. International environmental law has indeed become a favourite testing ground for innovative policy instruments, including economic incentives (for "positive measures") and financial mechanisms in particular.[2] Some of the experiments ongoing have drawn fire, from the defenders of more traditional ways of making international law as well as from the defenders of more traditional ways of spending money. I shall begin, therefore, by placing those instruments in the general context of international development assistance, then focus on the major new financial "carrots" of global envi-

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1 L. Condorelli, Preface to L. Boisson de Chazournes *et al.* (eds), *Protection Internationale de l'Environnement*, 1997, 7 ("laboratoire de pointe"); and P.M. Dupuy, "Où en est le droit international de l'environnement à la fin du siècle?", *RGDIP* 101 (1997), 873 et seq., (900).

2 See P.H. Sand, "International Economic Instruments for Sustainable Development: Sticks, Carrots and Games", *IJIL* 362 (1996), 1 et seq.; Id., "Sticks, Carrots, and Games", in: M. Bothe and P.H. Sand (eds), *Environmental Policy: From Regulation to Economic Instruments*, Hague Academy of International Law, forthcoming 1999; and P. Mickwitz, *Positive Measures: Panacea or Placebo in International Environmental Agreements*, Nordic Council of Ministers 1998.

ronmental agreements, and on some of the international legal problems they raise.

I. The Limits of Green Aid

True, the environment has begun to play a prominent part in overseas development assistance. Most bilateral and multilateral aid projects are now subject to well-established criteria and procedures for the prior assessment of their environmental impacts;[3] and a standard portion of ongoing (bilateral and multilateral) development funding is regularly earmarked for "green" projects. It is also true, however, that the percentage of environment-related aid programmes has remained well below 8% of total official development assistance (ODA).[4] The corresponding percentage of inter-governmental lending for environment-oriented projects by multilateral financial institutions is even smaller;[5] and the operational budgets of intergovernmental institutions designated for collective environmental action — such as the United Nations Environment Programme (UNEP) — are actually lower than those of some non-

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3 E.g., see the "Guidelines on Environment and Aid" adopted since 1991 by the Development Assistance Committee (DAC) of the Organisation for Economic Co-operation and Development; especially No.4, *Guideline for Aid Agencies on Global Environmental Problems*, OECD 1992. All World Bank projects are subject not only to a series of specific policies and procedures for prior environmental assessment introduced since 1989, but also to an evaluation of their potential "global externalities" (including emissions of greenhouse gases or ozone-depleting substances, pollution of international waterways, and impacts on biodiversity) pursuant to Operational Policy OP 10.04 on *Economic Evaluation of Investment Operations* (September 1994), para. 8 and fn. 5; see C.E. Di Leva, "International Environmental Law and Development", *Geo.Int'l Envtl.L.Rev.* 10 (1998), 501 et seq., (531).

4 Total official development assistance from OECD countries (about 30% of which is disbursed through multilateral institutions, while the remainder is bilateral aid) was US$ 49.8 billion in 1997, down from US$ 55.4 billion in 1996; *Development Co-operation: 1997 Report*, OECD 1998, updated figures in: http://www.oecd.org/dac/htm/online.htm.

5 World Bank lending for environmental projects, which had steadily increased since 1986, for the first time shows a decline in Fiscal Year 1998 (US$ 10.9 billion, down from US$ 11.6 billion in 1997); World Bank, *Annual Report 1998*, Figures 2 and 3-2 http://www.worldbank.org/html/extpb/annrep98.

governmental institutions in this field, such as the World Wide Fund for Nature (WWF).[6] Current figures — unlikely to increase in the foreseeable future — are only a fraction of the cost estimates for implementing *Agenda 21*, as outlined at the 1992 UN Conference on Environment and Development (UNCED)in Rio de Janeiro,[7] and are manifestly unrelated to actual problem needs. Environmental projects thus share the fate of all contemporary development assistance, with most donor countries falling miserably short of the long-proclaimed goal of 0.7% of GNP.[8] "Green aid" is inevitably hamstrung by the same economic constraints which continue to frustrate international attempts at bridging the North-South gap on the sole, if noble, basis of global solidarity.

II. The Emergence of Global Ecofunds

Yet, simultaneously, there has been a well-documented increase both in public awareness of global environmental problems and in what economists call "willingness to pay" for collective environmental action. As a result, a new type of international financial mechanisms emerged to address specific environmental issues identified as global risks (some-

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6 Budget data in *Yearbook of International Co-operation on Environment and Development* (1998–1999), 224 and 253 http://www.ext.grida.no/ggy-net; for a comparative assessment see W.E. Franz, "The Scope of Global Environmental Financing: Cases in Context", in: R.O. Keohane and Marc A. Levy (eds), *Institutions for Environmental Aid: Pitfalls and Promise*, 1996, 367 et seq.

7 US$ 600 billion annually, including US$ 125 billion on grant or concessional terms from the international community; para. 33.18 of the Report of the United Nations Conference on Environment and Development, Doc. A/CONF.151/26/Rev.1 (Vol. I), 417.

8 According to the 1997 OECD/DAC data (see note 4), official development assistance (ODA) from OECD countries represents about 0.22% of GNP on average — i.e., the lowest average in over 30 years, and way below the 0.7 target, which only the Scandinavian countries and the Netherlands have met. See also the 1997 Report of the UN Secretary General to the Commission on Sustainable Development, "Overall Progress Achieved since the United Nations Conference on Environment and Development", Doc. E/CN.17/1997/2, para. 99, "Financial Resources and Mechanisms", Doc. E/CN.17/1997/2/Add.23, paras. 33–36 http://www.un.org/esa/sustdev/dsd.htm; and J.G. Speth, "A New Global Environmental Framework", *Environmental Forum* 15 (1998), 44 et seq., (46).

times under the label of "environmental security")[9] or as global collective goods (sometimes under the label of "common heritage").[10] It is fashionable to explain that phenomenon as a paradigm shift[11] from an aggregation of individual state concerns to the securing of a community interest shared by all states.[12] An equally plausible explanation suggested by financial considerations would be the donors' enlightened self-interest.[13] Be that as it may, the politically correct phrase used today to distinguish this new selective (earmarked) funding from the main-

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9 On national security concerns underlying this concept, see P.H. Sand, "International Law on the Agenda of the United Nations Conference on Environment and Development: Towards Global Environmental Security?", *Nord.J.Int'lL* 60 (1991), 5 et seq., (9); and generally A.S. Timoshenko, "Ecological Security: Response to Global Challenges", in: E.B. Weiss (ed.), *Environmental Change and International Law: New Challenges and Dimensions*, 1992, 413 et seq.

10 On the solid economic interests behind the common heritage concept as originally applied to genetic resources, see G.S. Nijar and C.Y. Ling, "The Implications of the Intellectual Property Rights Regime of the Convention on Biological Diversity and GATT on Biodiversity Conservation: A Third World Perspective", in: A.F. Krattiger et al. (eds), *Widening Perspectives on Biodiversity*, 1994, 277 et seq., (279); V.M. Marroquín-Merino, "Wildlife Utilization: A New International Mechanism for the Prospection of Biological Diversity", *Law and Policy in International Business* 26 (1995), 303 et seq., (310); G. Rose, "International Regimes for the Conservation and Control of Plant Genetic Resources", in: M. Bowman and C. Redgwell (eds), *International Law and the Conservation of Biological Diversity*, 1996, 145 et seq., (154). See generally B.M. Russett and J.D. Sullivan, "Collective Goods and International Organization", *International Organization* 25 (1971), 845 et seq.

11 The term goes back to T.S. Kuhn, *The Structure of Scientific Revolutions*, 2nd edition 1970. See generally M. Jori, "Paradigms of Legal Science", *Rivista Internazionale di Filosofia del Diritto* 67 (1990), 230 et seq.

12 R. Dolzer, "Die internationale Konvention zum Schutz des Klimas und das allgemeine Völkerrecht", in: U. Beyerlin et al. (eds), *Recht zwischen Umbruch und Bewahrung*, 1995, 957 et seq., (972); U. Beyerlin, "State Community Interests and Institution-Building in International Environmental Law", *ZaöRV* 56 (1996), 601 et seq., (605); E. Kornicker, *Ius Cogens und Umweltvölkerrecht*, 1997, 157. See generally B. Simma, "From Bilateralism to Community Interest in International Law", *RdC* 250 (1994), 217 et seq.

13 B. Connolly, "Increments for the Earth: The Politics of Environmental Aid", in: Keohane and Levy (eds), see note 6, 327 et seq., (330).

stream of green aid[14] is the "achievement of global environmental benefits."

1. Historically, the first manifestation of this new approach was the establishment of the *World Heritage Fund (WHF)* under the 1972 UNESCO Convention for the Protection of the World Cultural and Natural Heritage.[15] The idea of preserving selected cultural and natural sites "for the present and future benefit of the entire world citizenry" goes back to a 1965 White House Conference on International Cooperation.[16] With 156 member countries, the 1972 Convention (in force since 1976) is the most widely accepted conservation treaty today. From the trust fund established pursuant to article 15 para.2 — with a current annual income of approximately US$4 million, about half of which goes to protected natural (as distinct from cultural) areas,[17] — any Party may request assistance for sites protected under the Convention, in the form of studies, provision of experts, training of staff, supply of equipment, loans, or emergency aid. Contributions to the Fund are prorated in accordance with the UNESCO contribution scale. The basic idea of the World Heritage Fund — to compensate the "host" countries of heritage sites for the special conservation efforts they make on behalf of the world community — thus goes beyond the traditional charitable motives of international aid, and recognizes a legal entitlement of the recipients, in return for the global benefits which their local action generates.[18]

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14 The greening of international development assistance itself went through a long and acrimonious debate with the recipients over the "additionality" and "green conditionality" of the resources generated for this purpose; see S. Macleod, *Financing Environmental Measures in Developing Countries: The Principle of Additionality*, IUCN Environmental Policy and Law Paper No. 6, 1974.

15 UNTS Vol. 1037 No. 15511.

16 See R.N. Gardner (ed.), *Blueprint for Peace*, 1966, 154 et seq.; and R.L. Meyer, "Travaux Preparatoires for the UNESCO World Heritage Convention", *Earth Law Journal* 2 (1976), 45 et seq.

17 Budget data in *Yearbook of International Co-operation on Environment and Development* (1998–1999), 148; see also D. Navid, "Compliance Assistance in International Environmental Law: Capacity-Building, Transfer of Finance and Technology", *ZaöRV* 56 (1996), 810 et seq.

18 P.H. Sand, "Trusts for the Earth: New International Financial Mechanisms for Sustainable Development", in: W. Lang (ed.), *Sustainable Development and International Law*, 1995, 167 et seq., (171).

2. It was the 1990 London amendment of the Montreal Protocol on Substances That Deplete the Ozone Layer[19] which for the first time formally entitled developing countries to obtain "subsidies"[20] to cover the costs of their participation in (and their compliance with) a treaty designed to produce global environmental benefits.[21] Amended article 10 established the *Montreal Protocol Multilateral Fund (MPMF*, initially at US$240 million, currently at US$540 million for 1997–1999),[22] with contributions based on the UN assessment scale for all Parties whose annual consumption of controlled substances exceeds 0.3 kg *per capita*. Developing countries may claim from the Fund "all agreed incremental costs ... in order to enable their compliance with the control measures of the Protocol"; i.e. mainly for phase-out of ozone-depleting sub-

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19 UNTS Vol. 1522 No. 26369 and Vol. 1684 No. 26369, *ILM* 26 (1987), 1541 et seq., and 30 (1991), 537 et seq. See generally R.E. Benedick, *Ozone Diplomacy: New Directions in Safeguarding the Planet*, revised edition 1998; E.A. Parsons, "Protecting the Ozone Layer", in: P.M. Haas, R.O. Keohane and M.A. Levy (eds), *Institutions for the Earth: Sources of Effective International Environmental Protection*, 1993, 49 et seq.

20 N.C. Scott, "The Montreal Protocol's Environmental Subsidies and Gatt: A Needed Reconciliation", *Tex.Int'l L.J.* 29 (1994), 211 et seq.; M. Bothe, "The Evaluation of Enforcement Mechanisms in International Environmental Law", in: R. Wolfrum (ed.), *Enforcing Environmental Standards: Economic Mechanisms as Viable Means?*, 1996, 13 et seq., (34), and J.B. Wiener, "Global Environmental Regulation: Instrument Choice in Legal Context", *Yale L.J.* 108 (1997), 677 et seq., (708).

21 Note the preamble (para. 7) as amended in 1990: "The funds (to be provided by the MPMF) can be expected to make a substantial difference in the world's ability to address the scientifically established problem of ozone depletion and its harmful effects..." For a recent quantification see J. Armstrong, "Global Benefits and Costs of the Montreal Protocol", in: P.G. Le Prestre, J.D. Reid and E.T. Morehouse Jr. (eds), *Protecting the Ozone Layer: Lessons, Models, and Prospects*, 1998, 173 et seq.

22 Budget data in *Yearbook of International Co-operation on Environment and Development* (1998–1999), 79. See J.M. Patlis, "The Multilateral Fund of the Montreal Protocol: A Prototype for Financial Mechanisms Protecting the Global Environment", *Cornell Int'l L.J.* 25 (1992), 181 et seq.; A. Wood, "The Multilateral Fund for the Implementation of the Montreal Protocol", *International Environmental Affairs* 5 (1993), 335 et seq.; T. Gehring, *Dynamic International Regimes: Institutions for International Environmental Governance*, 1994, 287 et seq.; E.R. De Sombre and J. Kauffman, "The Montreal Protocol Multilateral Fund: Partial Success Story", in: Keohane and Levy , see note 6, 89 et seq.

stances. "Agreed incremental costs"[23] thus became a central concept for implementation of the treaty, and a catchword for subsequent drafting of the 1992 Rio Conventions,[24] *Agenda 21*,[25] and the restructured GEF.[26] While the MPMF was established under the auspices of UNEP as trustee,[27] the "implementing agencies" are the World Bank, UNDP, UNEP and UNIDO.[28]

3. After a series of intergovernmental meetings and interagency contacts in 1989–1990, the World Bank's Board of Executive Directors in March 1991 established the *Global Environment Facility (GEF)*,[29] which according to its enabling instrument should "support programmes and activities for which benefits would accrue to the world at large while the country undertaking the measures would bear the cost,

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23 In 1992, the Conference of the Parties to the Montreal Protocol adopted an "indicative list of categories of incremental costs", *ILM* 32 (1993), 874 et seq. On the difficulty of extrapolating the concept to other global agreements, see A. Jordan and J. Werksman, "Financing Global Environmental Protection", in: J. Cameron, J. Werksman and P. Roderick (eds), *Improving Compliance with International Environmental Law*, 1996, 214 et seq. P. Manzini, *I costi ambientali nel diritto internazionale*, 1996.

24 Article 4 para.3 of the UN Framework Convention on Climate Change, and article 20 para.2 of the Convention on Biological Diversity, UNTS Vol. 1760 No. 30619 and Vol. 1771 No. 30822; *ILM* 31 (1992), 822 and 849.

25 See note 7, para. 33.14 lit. a (iii).

26 Article 2, *ILM* 33 (1994), 1283; see note 34.

27 http://www.unmfs.org and http://www.unep.org/unep/secretar/ozone/home.htm. On the question of the Fund's legal status, see note 83.

28 Pursuant to a bilateral "Ozone Projects Agreement" with the MPMF Executive Committee, the World Bank established a separate "Ozone Projects Trust Fund" for that purpose; IBRD Resolution 91-5, Annex D and Supplement, *ILM* 30 (1991), 1770.

29 IBRD Resolution 91-5, supplemented in October 1991 by tripartite procedural arrangements with UNDP and UNEP; *ILM* 30 (1991), 1735 et seq. See I.F.I. Shihata, "The World Bank and the Environment: A Legal Perspective", *Maryland Journal of International Law and Trade* 16 (1992), 1 et seq., (31); H. Sjöberg, *From Idea to Reality: The Creation of the Global Environment Facility*, GEF Working Paper No.10, 1994; S.A. Silard, "The Global Environment Facility: A New Development in International Law and Organization", *Geo.Wash.J.Int'lL&Econ.* 28 (1995), 607 et seq.; L. Boisson de Chazournes, "Le Fonds pour l'environnement mondial: recherche et conquête de son identité", *AFDI* 41 (1995), 612 et seq. and see also in this Volume; M. Ehrmann, "Die Globale Umweltfazilität (GEF)", *ZaöRV* 57 (1997), 565 et seq.

and which would not otherwise be supported by existing development assistance or environment programmes".[30] Following pledges and burden-sharing arrangements among donor states for approximately US$ 1 billion during the pilot phase (raised to US$ 2 billion at a first replenishment in 1994, and to US$ 2.75 billion for the period from 1998 to 2001), the GEF — jointly operated by the World Bank, UNDP and UNEP — became the major international funding source for environmental projects in three focal areas: climate change, biological diversity, and international waters (including marine and freshwaters).[31] In a fourth focal area (ozone layer protection), after unsuccessful proposals by some donor countries to merge MPMF and GEF,[32] the GEF now supplements MPMF activities in countries not eligible for funding under the Montreal Protocol (i.e., mainly the countries of Eastern Europe and the former Soviet Union).[33]

Following its re-structuring in 1994[34] — on the basis of recommendations by the 1992 Rio Conference,[35] prompted by criticism from developing countries in particular — the GEF was ultimately designated by the Conferences of the Parties to the 1992 Conventions on Climate Change and Biological Diversity to operate their "financial mechanisms".[36] By contrast, the Conference of the Parties to the 1994 Convention to Combat Desertification In Those Countries Experiencing Se-

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30 World Bank, Establishment of the Global Environment Facility, 1991; *ILM* 30 (1991), 1739.

31 See L. Jorgenson, "The Global Environment Facility: International Waters Coming into its Own", *Green Globe Yearbook of International Cooperation on Environment and Development*, 1997, 45 et seq.

32 See I.H. Rowlands, "The Fourth Meeting of the Parties to the Montreal Protocol: Report and Reflection", *Environment* 35 (1993), 25 et seq., (28); and Gehring, see note 22, 306.

33 See notes 67 and 121.

34 Instrument for the Establishment of the Restructured Global Environment Facility (Geneva, 14 March 1994), *ILM* 33 (1994), 1283 et seq.; see H. Sjöberg, "The Global Environment Facility", in: J. Werksman (ed.), *Greening International Institutions*, 1996, 148 et seq.; and generally http://www.gefweb.org.

35 *Agenda 21*, see note 7, para. 33.14 lit. a (iii).

36 On the relationship with the two conventions, see note 80.

rious Drought and/or Desertification,[37] which had also envisaged the GEF for this task, eventually opted for the International Fund for Agricultural Development (IFAD) instead.[38] More recently, in the context of negotiations for a new global agreement on persistent organic pollutants, operation of the future convention's financial mechanism by the GEF was again raised as a possibility.[39]

4. There is a fourth financial instrument which — albeit very much *sui generis* — is constitutionally geared to global environmental benefits: the *Rain Forest Trust Fund (RFT)* established in 1992 by the World Bank, to finance a pilot programme initiated by the G-7 group of countries for conservation of the Brazilian Amazon and Atlantic rain forests, with US$ 55.8 million pledged contributions to the core fund (as of 1998) and another US$ 324 million for related technical assistance projects from seven donor countries and the European Community, implemented under a 1994 bilateral framework agreement between Brazil and the World Bank (plans to share implementation with UNDP did not materialize).[40] The objectives of the programme (preservation of biodiversity, reduction in carbon emissions, and new knowledge about sustainable activities in tropical rain forests) are described as representing "benefits that are global in scope and justify financial and technical transfers from the international community to Brazil".[41] Although there

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37 *ILM* 33 (1994), 1328 et seq.; see M. Bekhechi, "Une nouvelle étape dans le développement du droit international de l'environnement: la Convention sur la désertification", *RGDIP* 101 (1997), 32 et seq.

38 As decided by the first Conference of the Parties, Rome 1997. Operation of the IFAD-hosted mechanism has not started so far, and the adoption of a Memorandum of Understanding with IFAD - UN Doc. ICCD/COP(2)/4, Add.1, as submitted to the second conference, Dakar 1998 - was deferred to the third COP, scheduled to be held at Recife/Brazil in November 1999. Meanwhile, the GEF continues to finance projects relating to deserts and land degradation to the extent that they fall within one of its four current focal areas; 1994 Instrument, article 3, see note 34.

39 At the second meeting of the Intergovernmental Negotiating Committee in Nairobi (January 1999); see also the 1998 report to the GEF Council, "Relations with Conventions", GEF/C12/12 (1998).

40 Sand, see note 18, 22 et seq.; G.J. Batmanian, "The Pilot Program to Conserve the Brazilian Rainforests", *International Environmental Affairs* 6 (1994), 3 et seq.; and World Bank, *Rain Forest Pilot Program Update*, Vol. 6 (1998).

41 IBRD Resolution 92-2 (24 March 1992) establishing the Rain Forest Trust Fund, Attachment 2 (Background Note), para. 1.

were initial proposals also to merge this fund with the GEF,[42] its present operation is entirely separate and not associated with any multilateral environmental agreement.[43] Nevertheless, the RFT offers useful lessons for generating global environmental benefits through a multiple-donors/single-recipient arrangement, which could easily be replicated in other areas; e.g., at the recent tenth meeting of the Parties to the Montreal Protocol (Cairo, November 1998), ten donor countries pledged a special contribution of US$ 19 million to shut down Russian chlorofluorocarbon and halon production factories by the year 2000.[44]

5. The 1997 Kyoto Protocol to the UN Framework Convention on Climate Change[45] paved the way for yet another variant of global eco-funding, this time involving the private sector as well. Pending further inter-governmental negotiations to specify the Protocol's provisions on "joint implementation" (article 6) and a "clean development mechanism" (article 12),[46] the World Bank has announced plans to launch a *Prototype Carbon Fund (PCF)*, as a closed-end mutual investment fund of US$ 100–120 million, to which industrialized countries and the busi-

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42 As in the case of desertification (see note 38), GEF funding of projects in the field of deforestation is possible within the context of the four focal areas, under article 3 of the 1994 Instrument; see note 34.

43 The 1992 Rio Conference failed to produce the binding global forest convention then envisaged; see R. Tarasofsky, *The International Forests Regime: Legal and Policy Issues*, 1995, 2 et seq.

44 International Institute for Sustainable Development (IISD), *Linkages Journal* 4 (1999), 22.

45 See note 24. Uncorrected text of the Protocol in *ILM* 37 (1998), 22 et seq.; corrected text at the website of the Bonn Secretariat, http://www.unfcc.de. See generally C. Breidenich, D. Magraw, A. Rowley and J.W. Rubin, "The Kyoto Protocol to the United Nations Framework Convention on Climate Change", *AJIL* 92 (1998), 315 et seq.

46 From the vast and rapidly growing literature, e.g. see O. Kuik, P. Peters and N. Schrijver (eds), *Joint Implementation to Curb Climate Change: Legal and Economic Aspects*, 1994; A.G. Hanafi, "Joint Implementation: Legal and Institutional Issues for an Effective International Program to Combat Climate Change", *Harvard Environmental Law Review* 22 (1998), 441 et seq.; D.M. Driesen, "Free Lunch or Cheap Fix? The Emissions Trading Idea and the Climate Change Convention", *Boston College Environmental Affairs Law Review* 26 (1998), 1 et seq.; J. Werksman, "The Clean Development Mechanism: Unwrapping the 'Kyoto Surprise'", *Review of European Community and International Environmental Law* 7 (1998), 147 et seq.

ness sector are expected to contribute on the basis of bilateral "participation agreements" (minimum US$ 10 million for public-sector and US$ 5 million for private-sector participants).[47] The Bank, in cooperation with the International Finance Corporation (IFC) and possibly other multilateral financial institutions, is to reinvest those funds in developing countries and in Eastern Europe, through projects for carbon emission reduction and/or carbon offsets (e.g., reforestation) that would qualify as global benefits.[48] The PCF could thus be a first step towards partial privatization of what has been termed the historic "environmental debt" of the North,[49] even though we still are a long way from its fair redistribution and internalization in terms of global welfare economics.[50]

III. Common Characteristics

1. The "new generation of financial mechanisms"[51] so outlined — which for the sake of convenience we may call ecofunds — is sufficiently dis-

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47 World Bank, Information Document on the Prototype Carbon Fund, February 1999, 5 et seq.; see also World Bank, Environment Matters: Annual Review 1998, 53. For NGO criticism see D. Wysham, "The World Bank: Funding Climate Chaos", *Ecologist* 29 (1999), 108 et seq.

48 Investors will receive carbon offset certificates (by a designated independent certifying company), as evidence of their efforts to comply with emission reduction targets, although any validation or "crediting" under arts. 6 or 12 of the Kyoto Protocol will be subject to the formal certification process being developed under the auspices of the Conference of the Parties; Di Leva, see note 3, 508 et seq., and notes 70 and 123.

49 A. Al-Gain, "Agenda 21: The Challenge of Implementation", in: A. Kiss and F. Burhenne-Guilmin (eds), *A Law for the Environment: Essays in Honour of Wolfgang E. Burhenne*, 1994, 21 et seq., (25) (defining the historical imbalance of pollutant emissions as "a debt owed by the industrial nations to the global environment, and by extension, to the nations of the world whose future development [is] now imperiled").

50 See the rather gloomy appraisal by R. Falk, "Environmental Protection in an Era of Globalization", *Yearbook of International Environmental Law* 6 (1995), 3 et seq.

51 L. Boisson de Chazournes, "Les mécanismes conventionnels d'assistance économique et financière et le fonds pour l'environnement mondial", in: C. Impériali (ed.), *L'effectivité du droit international de l'environnement*, 1998, 187 et seq., (190).

tinct from other global instruments to constitute a category of its own, as a brief comparison with existing environment-related funds within the UN system shows:

- The 12 "*Convention Trust Funds*" established since 1978 under the auspices or at the initiative of UNEP for several regional and global treaties (with contributions currently totalling ca. US$ 20 million annually)[52] were set up as administrative cost accounts for the operation of secretariat and meeting services,[53] or as collection accounts for voluntary donations to support participation by developing countries.[54] While the latter type of funds may indeed be considered as contributing to treaty implementation, their voluntary nature places them in the traditional category of (charitable) green aid discussed in Section I.[55] Also in that category — albeit on the fringe of the UN System — is the Wetland Conservation Fund established in 1990 under the 1971 Ramsar Convention on Wetlands of International Importance Especially as Waterfowl Habitat[56] (renamed the Ramsar Small Grants Fund in 1996, with contributions currently totalling less than half a million US$ annually)[57] to assist

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52 Sand, see note 18, 172 et seq.; and Sand, see note 84, 487 et seq.

53 Special trust fund accounts (administered by the UNEP Environment Fund in Nairobi) for the 1973 Convention on International Trade in Endangered Species of Wild Fauna and Flora, the 1979 Convention on Conservation of Migratory Species of Wild Animals, the 1985 Vienna Convention for the Protection of the Ozone Layer, the 1989 Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal, and the trust funds set up for regional marine environment conventions in the Mediterranean (1976), the Gulf (1978), the West and East African coasts (1981 and 1985), and the Caribbean (1983). A similar trust fund account (administered by the UN Secretariat in New York) was set up for the 1979 UN/ECE Convention on Long-Range Transboundary Air Pollution (LRTAP), mainly for international administrative costs of the European Monitoring and Evaluation Programme (EMEP) pursuant to a 1984 protocol, UNTS Vol. 1491 No. 25638; *ILM* 24 (1985), 484 et seq.

54 E.g., UNEP trust funds to finance attendance at Montreal Protocol meetings, see note 19; and for bilateral technical assistance under the Basel Convention, see note 60.

55 See notes 4–8.

56 UNTS Vol. 996 No. 14583; see M.J. Bowman, "The Ramsar Convention Comes of Age", *Neth.Int'lL Rev.* 42 (1995), 1 et seq., 40.

57 Budget data in Yearbook of International Co-operation on Environment and Development (1998–1999), 158; Navid, see note 17, 815.

member countries in their conservation efforts for protected areas designated under the treaty. Though following the pattern of the WHF, the mechanism was never incorporated in the text of the Ramsar Convention, and contributions are voluntary only.

- The *International Oil Pollution Compensation (IOPC) Funds*, established in 1978–1996 (under the auspices of the IMO, London) pursuant to the 1971 Brussels Convention,[58] serve rather different economic purposes, mainly risk distribution and insurance against major pollution accidents (with contributions based on oil shipments received and totalling, on average, ca. US$ 10 million annually to the general fund and ca. US$ 80 million to major claim accounts).[59] That is also true of proposals for a similar liability/compensation and/or emergency fund under the 1989 Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal,[60] or for a global general "super-fund" to cover the risks of other environmental accidents.[61]

2. On the other hand, the new ecofunds (WHF, MPMF, GEF, RFT, and eventually the PCF) do have a number of characteristic features in

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58 International Convention on the Establishment of an International Fund for Compensation of Oil Pollution Damage, UNTS Vol. 1110 No. 17146; on the separate fund set up pursuant to the 1992 London Protocol, see M. Jacobsson, "Oil Pollution Liability and Compensation: An International Regime", *Uniform Law Review*, New Series 1 (1996-2), 260 et seq.

59 Supplementing the civil liability regime established by the 1969 Brussels Convention, UNTS Vol. 973 No. 14097, and related funds of the shipping industry (TOVALOP 1969 and CRISTAL 1971); *ILM* 8 (1969), 497 et seq., and 10 (1971), 137 et seq. See R. Ganten, *International System for Compensation of Oil Pollution Damage*, 1981; B.P. Herber, "Pigovian Taxation at the Supranational Level: Fiscal Provisions of the International Oil Pollution Compensation Fund", *Journal of Environment and Development* 6 (1997), 110 et seq.; *Annual Report on the Activities of the International Oil Pollution Compensation Fund*, 1998.

60 *ILM* 28 (1989), 657 et seq.; see P. Lawrence, "Negotiation of a Protocol on Liability and Compensation for Damage Resulting from Transboundary Movements of Hazardous Wastes and their Disposal", *Review of European Community and International Environmental Law* 7 (1998), 249 et seq., (252).

61 See H. Smets, "COSCA: A Complementary System for Compensation of Accidental Pollution Damage", in: P. Wetterstein (ed.), *Harm to the Environment: The Right to Compensation and the Assessment of Damages*, 1997, 223 et seq.

common, especially with regard to governance, burden-sharing and entitlement to funding.

(a) *Governance:* The four existing global ecofunds operate under guidance from decision-making bodies reflecting a delicate North-South balance — the "semicircles syndrome" which also characterized UNCED:[62]

- The governing body of the WHF is the World Heritage Committee, composed of 21 members elected by the Parties to the Convention. Under the current "equitable representation" formula pursuant to article 8 para.2, 12 members represent developing countries and nine developed countries. According to article 13 para.8, all decisions that cannot be reached by consensus require a two-thirds majority of 14, hence both constituencies can effectively block a vote.
- The governing body of the MPMF is the Executive Committee, composed of 14 members elected by the Parties to the Protocol, seven of which represent developing countries and seven "others". Pursuant to article 10 para.9, funding decisions that cannot be reached by consensus require a two-thirds majority *and* a majority within both constituencies.
- The governing body of the GEF is the Council, composed of 32 members elected by the GEF participant states, 16 of which represent developing countries, 14 developed countries, and two "the countries of central and eastern Europe and the former Soviet Union" (article 16). According to article 25 lit.(c), decisions that cannot be reached by consensus require a "double weighted majority" including the votes representing 60% of all participants *and* 60% of all donors.
- Even though the RFT has no institutional structure of its own, its governance reflects the same donor/recipient balance, as expressed in the 1994 bilateral framework agreement between the World Bank and Brazil as the host country (signature of which was delayed because of the constitutional requirement of prior approval by the Brazilian Senate). While operational decisions for project appraisal, approval and administration are made "in accordance with proce-

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62 See P.H. Sand, "UNCED and the Development of International Environmental Law", *Yearbook of International Environmental Law* 3 (1992), 3 et seq., (15); Sand, "International Environmental Law After Rio", *EJIL* 4 (1993), 377 et seq., (389).

dures and practices of the Bank",[63] policy guidance and periodic performance review is entrusted to annual meetings of the programme participants (the eight donors and Brazil, acting in consensus), with input from an International Advisory Group of scientific/technical experts. The new PCF – besides introducing an innovative form of private stakeholder participation (with three of the seven members of its Participation Committee coming from the business sector) – will follow a similar pattern, including prior project approval by each host country, and policy guidance from annual participants' meetings and an advisory Host Country Committee.[64]

(b) *Burden-sharing:* The sharing formula both of the WHF and the MPMF is based on variations of the UN scale of assessment (as periodically revised by the General Assembly), whereas GEF, RFT and the future PCF follow the practice of the International Development Association (IDA) where contribution shares are negotiated *ad hoc* and periodically re-negotiated at special replenishment meetings. The net result for the main contributors is of course different, though not fundamentally so, as the following comparison shows:[65]

1998 UN Assessment (% of regular UN budget)		**1998 GEF Pledges** (% of all pledges to 1998)		**1998 RFT Shares** (% of core funding)	
USA	25.0	USA	21.3	Germany	34.7
Japan	17.9	Japan	20.5	European Union	25.3
Germany	9.6	Germany	11.9	Japan	12.2
France	6.4	France	7.1	USA	9.8
Italy	5.3	United Kingdom	6.7	Italy	7.0
United Kingdom	5.0	Italy	5.7	Netherlands	5.7

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63 Article 4 of the 1994 Framework Agreement, see note 40; i.e., ultimately under the weighted-voting system of the World Bank's 24-member Board of Executive Directors, where Brazil represents one of three Latin American constituencies.

64 World Bank, see note 47, 12.

65 Adapted from the tables in *United Nations Handbook 1998*, 342 et seq., and in the GEF Draft Annual Report, GEF/C12/13 (1998), 57; RFT figures reflect trust fund contributions received by 1998. The excerpt from the UN scale of assessment omits Russia and is not prorated to the actual number of GEF donors; percentage figures have been rounded in both scales.

Canada	2.8	Canada	4.2	United Kingdom	4.1
Spain	2.5	Netherlands	3.5	Canada	1.2
etc.		etc.			

There is one significant difference in burden-sharing between the WHF and the MPMF formula, which however affects the "minor" donors only:

- contributions to the WHF are due from all Parties to the Convention,[66] regardless of their development status, and are fixed at the uniform level of 1% of each country's UNESCO membership fees (i.e., almost identical to the UN scale of assessment);
- contributions to the MPMF are due only from Parties other than those "operating under Art.5(1)"; i.e., outside the list of developing countries (as determined from time to time by the Conference of the Parties) whose annual consumption of controlled substances is below the level of 0.3 kg *per capita*. Hence most (not all) developing countries are exempt from the obligation to contribute. While the overall contribution scale of the MPMF (the UN scale) is thus nominally unrelated to the ozone layer problem — except for the coincidence that the main donors happen to be the industrialized countries mainly responsible for the ozone hole, the lower end of that scale may indeed be said to reflect the "polluter pays" principle, by exempting the non-polluters.

(c) *Entitlement:* Leaving aside here the somewhat unique case of the RFT (with its single recipient developing country), the other existing global ecofunds provide funding essentially on the basis of need; i.e., to economically disadvantaged countries in the "South" and in the former "East".

- funding from the WHF is available, in principle, to all host countries of world heritage sites, regardless of their development status. Under article 21 para.1, however, funding requests must also give "reasons why the resources of the State requesting assistance do not allow it to meet all the expenses", which *de facto* rules out the developed countries.

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66 Though giving countries an option between "compulsory" and "voluntary" contributions, the assessment system is in practice mandatory for both categories; S. Lyster, *International Wildlife Law*, 1985, 208 et seq., (230).

- funding from the MPMF is restricted, in principle, to Parties "operating under Art. 5(1)"; i.e., developing countries not exceeding the specified consumption level for controlled substances. Under a bilateral agreement with the MPMF Executive Committee, however, the GEF provides equivalent funding to "otherwise eligible recipient countries that are not Article 5 countries, or whose activities, while consistent with the objectives of the Montreal Protocol, are of a type not covered by the Multilateral Fund," (i.e., especially countries in Eastern Europe and the former Soviet Union), provided they are Parties to the Protocol, have ratified the London amendments, and are in compliance with their obligations under the amended Protocol.[67]
- funding from the GEF is restricted under article 9 to member countries of the conventions concerned, provided they are eligible for UN technical assistance or for IBRD/IDA loans/credits; i.e., are below the official "poverty line" of US$ 4,866 annual *per capita* income.[68] As a somewhat different variant, the new Prototype Carbon Fund (PCF) will — in line with the country groups defined in the Framework Convention on Climate Change, and in view of arts 6 and 12 of the Kyoto Protocol[69] — focus both on "countries undergoing the process of transition to a market economy" listed in Annex I of the Convention (i.e., Eastern Europe), and on "Parties not included in Annex I" (i.e., developing countries).[70]

IV. Apprehensions

As might have been expected, these new financial incentives to induce compliance with global environmental agreements did not find unmitigated favour with all commentators. "Carrots" have been criticized on three counts: legitimacy, efficacy, and credibility.

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67 GEF, *Operational Strategy*, 1996, 64; see P.H. Sand, "The Montreal Regime: Sticks and Carrots", in: Le Prestre, Reid and Morehouse, see note 21, 107 et seq., (109); and see note 120.

68 GNP in 1993 dollars, as further illustrated by Silard, see note 29, 653 fn.194.

69 See notes 24 and 45.

70 See note 48. It is envisaged that there will be "a broad balance" in the number of PCF projects to be undertaken in the two country groups; World Bank, see note 47, 16.

1. *Lack of legitimacy?* This critique has been leveled exclusively — and massively — at the GEF, largely because of its close association with the World Bank, which is still a favourite global villain for opinion-leaders in the environmental NGO community and the Third World.[71] Suspicions of donor-domination remain, even though many of the early objections against the alleged "undemocratic", closed and top-down style of decision-making in the GEF pilot phase were at least partly met and remedied by its post-Rio re-structuring.[72] In the wake of highly successful NGO pressures for policy reforms within the World Bank Group[73] — through revised environmental policy directives and procedures, including the Independent Inspection Panel set up in 1993[74] — the GEF has become more responsive to the demands of developing countries and civil society representatives,[75] to the point where it is now depicted as the environmentalists' Trojan horse in the Bretton Woods system.[76] Certainly, the mandate of multilateral development banks to help implementing global environmental agreements is well-established.[77]

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71 E.g., see V. Shiva, "Global Environment Facility: Perpetuating Non-Democratic Decision-Making", *Third World Economics*, 31 March 1993, 17 et seq.; B. Rich, *Mortgaging the Earth: The World Bank, Environmental Impoverishment, and the Crisis of Development*, 1994, 175 et seq.; and J. Gupta, "The Global Environment Facility in its North-South Context", *Environmental Politics* 4 (1995), 19 et seq.

72 See note 34.

73 See K. Horta, "The World Bank and the International Monetary Fund", in: Werksman (ed.), see note 34, 131 et seq.; I.A. Bowles and C.F. Kormes, "Environmental Reform at the World Bank: The Role of the U.S. Congress", *Va.J.Int'lL* 35 (1995), 777 et seq., (836).

74 IBRD Resolution 93-10, *ILM* 34 (1995), 503 et seq.; see I.F.I. Shihata, *The World Bank Inspection Panel*, 1994, 41 (confirming that the resolution also applies to GEF projects implemented by the World Bank).

75 See Lin Gan, "The Making of the Global Environment Facility: An Actor's Perspective", *Global Environmental Change* 3 (1993), 256 et seq.; and J. Werksman, "Consolidating Governance of the Global Commons: Insights from the Global Environment Facility", *Yearbook of International Environmental Law* 6 (1995), 27 et seq.

76 J.D. Werksman, "Greening Bretton Woods", in: P. Sands (ed.), *Greening International Law*, 1993, 65 et seq., (84).

77 G. Handl, "The Legal Mandate of Multilateral Development Banks as Agents for Change Toward Sustainable Development", *AJIL* 92 (1998), 642 et seq.

2. *Lack of efficacy?* This criticism has been raised both against the GEF and the MPMF, largely because of the sheer complexity of their institutional structure. Just how effective can a mechanism be that is operated jointly by three or more autonomous or semi-autonomous institutions within the UN System, whose internal rivalries have aptly been likened to those of medieval feudal barons;[78] which is run by a governing body deliberately split into North-South caucus blocs;[79] and which, on top of that, must take policy guidance from one or several Conferences of 150-plus Parties, under the terms of "Memoranda of Understanding" negotiated like diplomatic treaties?[80] It sounds like a miracle that the two mechanisms should function at all; and yet they do, and not too badly, even when compared to institutions operating under a single treaty and a single organization like the WHF. While the pilot phase both of the MPMF and the GEF had received mixed evaluations,[81] their present ratings are surprisingly positive.[82]

That is not to imply that all questions have been resolved — starting with the question of their legal status:

- In the case of the MPMF, the Conference of the Parties decided in 1994 to secure a higher degree of organizational autonomy by proclaiming the "juridical personality, privileges and immunities of the

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78 B. Urquhart, *A Life in Peace and War*, 1987, 119: "There was, and is, as little chance of the Secretary-General coordinating the autonomous specialized agencies of the UN system as King John of England had of bringing to heel the feudal barons."

79 See text following note 62.

80 See R. Mott, "The GEF and the Conventions on Climate Change and Biological Diversity", *International Environmental Affairs* 5 (1993), 299 et seq.; Boisson de Chazournes, see note 51, 194 et seq.; and Ehrmann, see note 29, 599 et seq. The "MoU" formula bypassed the opinion of the UN Office of Legal Affairs as to the GEF's incapacity to conclude a more formal agreement; see note 85.

81 See A. Wood, "The Global Environment Facility Pilot Phase", *International Environmental Affairs* 5 (1993), 219 et seq.; D. Fairman, "The Global Environment Facility: Haunted by the Shadow of the Future", in: Keohane and Levy , see note 6, 55 et seq.; De Sombre and Kauffman, see note 22.

82 See the report of the second independent evaluation carried out prior to the 1998 replenishment of the GEF: G. Porter, R. Clémençon, W. Ofosu-Amaah and M. Philips, *Study of GEF's Overall Performance*, December 1997. On the MPMF, see F. Biermann, "Financing Environmental Policies in the South: Experiences from the Multilateral Ozone Fund", *International Environmental Affairs* 9 (1997), 179 et seq.

Multilateral Fund", which boldly purported to constitute a UN subsidiary body as a "body under international law".[83]

The legal status of the restructured GEF — based on a governmentally-authorized interagency agreement among UNEP, UNDP and the World Bank[84] — also is not uncontroversial: Whereas the UN Office of Legal Affairs defines it as "a subsidiary body of the World Bank and the United Nations, acting through UNDP and UNEP, ... [without] legal capacity to enter into legally binding arrangements or agreements",[85] others describe it as an international organization with its own legal personality,[86] or at least a "quasi-international organization".[87]

3. *Lack of credibility?* Perhaps one of the most perplexing question marks for all global ecofunds relates to their role as instruments to promote conformity with international law. Claims to the effect that financial carrots are a legitimate method of "active treaty management" and transition towards progressive compliance (the so-called "managerial" and "transformational" schools of thought)[88] have recently been chal-

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83 Decision VI/16, Yearbook *of International Environmental Law* 5 (1994), 937. The language of the decision not withstanding, the Fund's legal *personality* presumably remains that of the United Nations, even though the MPMF may have the legal *capacity* to enter into contracts, to acquire property and to institute legal proceedings.

84 See P.H. Sand, "The Potential Impact of the Global Environment Facility of the World Bank, UNDP and UNEP", in: Wolfrum, see note 20, 479 et seq.; and J. Werksman, "Consolidating Governance of the Global Commons: Insights from the Global Environment Facility", *Yearbook of International Environmental Law* 6 (1995), 48 et seq.

85 Memorandum to the Executive Secretary of the UN Framework Convention on Climate Change, 23 August 1994, annexed to Doc. A/AC.237/74 (1994); Text in: P.H. Sand, *The Role of International Organizations in the Evolution of Environmental Law*, UNITAR, 1997, 69 et seq.; Boisson de Chazournes, see note 29, 621; Ehrmann, see note 29, 593.

86 H.G. Schermers and N.M. Blokker, *International Institutional Law*, 3rd edition 1995, 27; and A. Klemm, "Die Global Environment Facility", *Recht der Internationalen Wirtschaft* 44 (1998), 921 et seq., (922).

87 Silard, see note 29, 644. Perhaps the term should be "international quasi-organization".

88 A. Chayes and A.H. Chayes, *The New Sovereignty: Compliance with International Regulatory Agreements*, 1996; R.B. Mitchell, "Compliance Theory: an Overview", in: Cameron, Werksman and Roderick, see note 23, 3 et seq.; M.A. Levy, O.R. Young and M. Zürn, "The Study of Interna-

lenged by more conservative calls for strict observance of treaty rules and coercive means to secure respect for the principles of good faith and *pacta sunt servanda*, also in the field of global environmental regimes (the so-called "political economy theory of enforcement").[89] To these critics, "side payments"[90] (which some would call bribes) to reward certain states for meeting their legal obligations would amount to "subsidized compliance",[91] thereby "undermining the credibility of international environmental law."[92]

Without the promise of financial aid for their participation, however, the countries of the South, China and India in particular, "would not have signed up to the Montreal Protocol, thereby undermining the ozone regime's global reach,"[93] and *without* the prospect of losing their GEF funding, the countries of Eastern Europe and the former Soviet Union would simply continue their lucrative free-riding production of ozone-depleting substances.[94] In the face of this dilemma, the granting of "selective incentives"[95] to these reluctant parties has been justified by

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tional Regimes", *European Journal of International Relations* 1 (1995), 267 et seq., (283).

89 G.W. Downs, D.M. Roche and P.N. Barsoon, "Is the Good News About Compliance Good News About Cooperation?", *International Organization* 50 (1996), 379 et seq.; G.W. Downs, "Enforcement and the Evolution of Cooperation", *Mich.J.Int'lL* 19 (1998), 319 et seq.

90 P.T. Stoll, "The International Environmental Law of Cooperation", in: Wolfrum (ed.), see note 20, 39 et seq., (80), using a term introduced in international regime analysis by A. Underdal, *The Politics of International Fisheries Management: The Case of the North-East Atlantic*, 1980, 36.

91 U. Beyerlin and T. Marauhn, *Law-Making and Law Enforcement in International Environmental Law after the 1992 Rio Conference*, 1997, 160 (para. 26: "bezahlte Rechtsbeachtung" in the German original).

92 T. Marauhn and M. Ehrmann, "Workshop on 'Institution-Building in International Environmental Law: Summary of the Discussion", *ZaöRV* 56 (1996), 821 et seq., (827).

93 R. Falkner, "The Multilateral Ozone Fund of the Montreal Protocol", *Global Environmental Change* 8 (1998), 171 et seq., (173); and H.F. French, *Partnership for the Planet: An Environmental Agenda for the United Nations*, Worldwatch Paper No. 126, 1995, 24.

94 See D. Brack, *International Trade and the Montreal Protocol*, 1996, 99 et seq.; and see note 120.

95 The term goes back to M. Olson, The Logic of Collective Action: Public Goods and the Theory of Groups, revised edition 1971, 51; and M. Olson,

reference to the "common but differentiated responsibilities" formulated in Principle 7 of the 1992 Rio Declaration on Environment and Development[96] and article 3 para.1 of the Convention on Climate Change.[97] The Rio package was indeed bargained between groups of states,[98] as a "multipartite-bilateral" deal (to use Lord McNair's treaty typology)[99] not unlike global commodity agreements that are negotiated between producer and consumer countries;[100] i.e., based on synallagmatic (if asymmetric) equivalence — rather than identity — of the two groups' respective obligations. The resulting preferential treatment ("double standards", or "positive discrimination")[101] reserved for eco-

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The Rise and Decline of Nations, 1982, 21. See P.H. Sand, Lessons Learned in Global Environmental Governance, 1990, 6.

96 Text in the Report of UNCED, see note 7, 4. The wording of the principle was based in part on a statement by the 1991 OECD Ministerial Meeting in Paris, *Yearbook of International Environmental Law* 2 (1991), 529 (Doc. 24, para.5). Even so, the US delegation at Rio reserved its position on this and other principles of the Declaration, see Doc.A/CONF.151/26, Vol. IV (1993), para.16, and J. Kovar, "A Short Guide to the Rio Declaration", *Colo.J.Int'l Envtl.L.&Pol'y* 4 (1993) 119 et seq. See also Institut de Droit International, Resolution on Procedures for the Adoption and Implementation of Rules in the Field of the Environment, Strasbourg 1997, article 4 (noting "the differences in the financial and technological capabilities of States and their different contribution to the environment problem").

97 See note 24; R. Wolfrum, "Means of Ensuring Compliance With and Enforcement of International Environmental Law", *RdC* 1998, (forthcoming), conclusions.

98 Sand, see note 62, 8; see also R. Ricupero, "Chronicle of a Negotiation: The Financial Chapter of Agenda 21 at the Earth Summit", *Colo.J.Int'l Envtl.L.&Pol'y* 4 (1993), 81 et seq.; and B.I. Spector, "The Search for Flexibility on Financial Issues at UNCED: An Analysis of Preference Adjustment", in: B.I. Spector, G. Sjöstedt and I.W. Zartman, *Negotiating International Regimes: Lessons Learned from the United Nations Conference on Environment and Development*, 1994, 87 et seq.

99 A. McNair, *The Law of Treaties*, 1961, 29.

100 E.g., the 1994 International Tropical Timber Agreement, *ILM* 33 (1994), 1014 et seq.; D. König, "New Approaches to Achieve Sustainable Management of Tropical Timber", in: Wolfrum, see note 20, 337 et seq., (352).

101 K. Kummer, "Providing Incentives to Comply With Multilateral Environmental Agreements: An Alternative to Sanctions?", *European Environmental Law Review* 3 (1994), 256 et seq., (260); W. Lang, "Is the Protection of the Environment a Challenge to the International Trading System?", *Geo.Int'lEnvtl. L.Rev.* 7 (1995), 463 et seq., (475).

nomically disadvantaged treaty partners was part of the price paid for universal participation.[102]

V. Quid Pro Quo

This equitable North-South deal is formally secured by reservations of reciprocity,[103] such as article 4 para.7 of the Climate Change Convention, stipulating that "the extent to which developing country Parties will effectively implement their commitments under the Convention will depend on the effective implementation by developed country Parties of their commitments under the Convention related to financial resources and transfer of technology..."[104] That provision creates an "explicit linkage"[105](a *junctim*, as it were[106]) between specific substantive obligations of developing countries and the donor countries' promise of financial and technical assistance. Hence non-compliance by the donors would empower the developing countries to retaliate by postponing[107] or suspending[108] their own implementation.

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[102] See generally D.M. Magraw, "Legal Treatment of Developing Countries: Differential, Contextual, and Absolute Norms", *Colo.J.Int'l Envtl.L.& Pol'y* 1 (1990), 69 et seq.; V.P. Nanda, "International Environmental Protection and Developing Countries' Interests: The Role of International Law", *Tex.Int'lL.J.* 26 (1991), 497 et seq.; J. Ntambirweki, "The Developing Countries in the Evolution of International Environmental Law", *Hastings Int'l&Comp.L.Rev.* 14 (1991), 905 et seq.; H. Beck, *Die Differenzierung von Rechtspflichten in den Beziehungen zwischen Industrie- und Entwicklungsländern*, 1996.

[103] See generally B. Simma, "Reciprocity", in: R. Bernhardt (ed.), *Encyclopedia of Public International Law*, 7 (1984), 400 et seq., and Vol. 4, 1999, 29 et seq.; and R.O. Keohane, "Reciprocity in International Relations", *International Organization* 40 (1986), 1 et seq.

[104] Article 20 para.4 of the Biodiversity Convention is almost identical (see note 24), as both are based on similar language in article 5 para.5 of the Montreal Protocol as amended in 1990 (see note 19).

[105] D. Hunter, J. Salzman and D. Zaelke, *International Environmental Law and Policy*, 1998, 472.

[106] Klemm, see note 86, 925.

[107] Stoll, see note 90, 90.

[108] Boisson de Chazournes, note 29, 630 ("condition à effet suspensif").

It has been argued that the donors' default, if not entitling an individual developing country to "automatic delinkage",[109] would at least trigger a collective non-compliance procedure yet to be defined.[110] Meanwhile, however, article 5 para.6 of the Montreal Protocol clearly entitles an individual developing country to invoke the donors' default as a valid "exculpation" for its own non-compliance.[111] The debate thus turns on the general question of permissible countermeasures for breach of a multilateral treaty — a matter where the 1969 Vienna Convention on the Law of Treaties[112] offers disappointingly and notoriously scant guidance.[113]

One generally accepted qualification is the proportionality of such countermeasures.[114] Presumably, retaliatory suspension of compliance by a developing country based on donors' default should be confined to the type of implementation measures that were intended to be covered by donor funds; e.g., the categories of measures listed in the "indicative list" of incremental costs.[115] Non-compliance limited to this specific range of treaty obligations — i.e., within the agreed synallagmatic scope of arts. 5 para.5 Montreal Protocol, 4 par.7 Climate Change Convention, and 20 para.4 Convention on Biological Diversity — may indeed be a legitimate exercise of reciprocity rights, and hence — by analogy

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109 L. Boisson de Chazournes, "The United Nations Framework Convention on Climate Change: On the Road Towards Sustainable Development", in: Wolfrum (ed.), see note 20, 285 et seq., (299).

110 Beyerlin and Marauhn, see note 91, 129; see also T. Marauhn, "Towards a Procedural Law of Compliance Control in International Environmental Relations", *ZaöRV* 56 (1996), 696 et seq.; and J. Werksman, *Responding to Non-Compliance under the Climate Change Regime*, OECD Information Paper, OECD: Paris 1998.

111 Beyerlin and Marauhn, see note 91, 130.

112 UNTS Vol. 1155 No. 18232; *ILM* 8 (1969), 679 et seq.

113 Simma, see note 12, 352; and Simma, "Reflections on Article 60 of the Vienna Convention on the Law of Treaties and Its Background in General International Law", *ÖZöRV* 20 (1970), 5 et seq. See also D.W. Bowett, "Economic Coercion and Reprisals by States", *Va.J.Int'lL* 13 (1972), 1 et seq., (11); and K. Sachariew, "State Responsibility for Multilateral Treaty Violations: Identifying the 'Injured State' and Its Legal Status", *NILR* 35 (1988), 273 et seq.

114 See M. Koskenniemi, "Breach of Treaty or Non-Compliance? Reflections on the Enforcement of the Montreal Protocol", *Yearbook of International Environmental Law* 3 (1992), 123 et seq., (140, 153).

115 See note 23.

with article 5 par.6 Montreal Protocol – would in turn exonerate developing countries Parties to the Climate Change and Biodiversity Conventions from the normal consequences of a breach of treaty.[116]

Conversely, operation of these new financial instruments also highlights another aspect of negative ("tit-for-tat") reciprocity which is already evident in the "case law" of the GEF Council, in response to recommendations by the Montreal Protocol's Implementation Committee:[117] If the granting of funds for compliance assistance is an effective incentive, the *withholding* of such financial support is an equally effective collective countermeasure against the recipient's non-compliance,[118] and hence adds a new category of "selective disincentives" to the arsenal of available treaty sanctions.[119] The issue arose in two of the first cases considered by the Committee,[120] and led to at least temporary suspension of GEF funding for Russia, under the *Operational Strategy* rule which makes funding contingent upon full compliance with the Protocol.[121]

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116 See generally S. Rosenne, *Breach of Treaty*, 1985; and J. Setear, "Responses to Breach of a Treaty and Rationalist International Relations Theory: The Rules of Release and Remediation in the Law of Treaties and the Law of State Responsibility", *Va.L.Rev.* 83 (1997), 1 et seq.

117 See D.G. Victor, "The Operation and Effectiveness of the Montreal Protocol's Non-Compliance Procedure", in: D.G. Victor, K. Raustiala and E.B. Skolnikoff (eds), *The Implementation and Effectiveness of International Environmental Commitments*, 1998, 137 et seq.; Sand, see note 84, 496.

118 M.E. O'Connell, "Enforcing the New International Law of the Environment", *GYIL* 35 (1992), 293 et seq., (319) (withholding of financial assistance as "retorsion").

119 See note 95. On the need to keep a balance of incentives and disincentives to discourage free-riding, see H.F. Chang, "Carrots, Sticks, and International Externalities", *International Review of Law and Economics* 17 (1997), 309 et seq., (320). On the need also to keep the "stick" of general international legal sanctions for breach of a treaty, see M. Koskenniemi, "New Institutions and Procedures for Implementation Control and Reaction", in: Werksman, see note 34, 236 et seq., (248) (quoting Sir Robert Jennings).

120 Decisions VII/15-19 (1995) and VIII/22-25 (1996); Victor, see note 117, 155 et seq.; J. Werksman, "Compliance and Transition: Russia's Non-Compliance Tests the Ozone Regime", *ZaöRV* 56 (1996), 750 et seq.

121 See note 67. However, at their tenth meeting (Cairo, November 1998), the Parties to the Montreal Protocol recommended continued GEF assistance for eight successor countries of the former Soviet Union, while cautioning

Along the same lines, article 6 para.1 lit.(c) of the 1997 Kyoto Protocol has added a new "compliance conditionality",[122] so as to withhold any certification of emission credits from countries not in compliance with their other treaty obligations — a built-in default clause which may soon become applicable to carbon offset projects financed by the World Bank's new PCF, too.[123] That trend is confirmed by the recent practice of the WHF, where reporting duties and compliance controls — in return for financial assistance — are gradually being tightened,[124] or "deepened", in the jargon of enforcement theory.[125]

The lesson, then, is not only that it is often difficult in global environmental regimes to tell a carrot from a stick;[126] paradoxically, what may have seemed like a carrot when granted tends to become a stick when denied.

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them that stricter measures will be imposed if they do not adhere to their new benchmarks for phase-out of ozone-depleting substances; IISD, see note 44.

122 See note 45; Werksman, see note 46, 156.

123 See notes 48 and 70. Pursuant to its *Operational Manual Statement on Environmental Aspects of Bank Work* (OMS 2.36, May 1984, para. 9 lit. e), the World Bank "will not finance projects that contravene any international environmental agreements to which the member country concerned is a party"; Text in: I.F.I. Shihata, *The World Bank Inspection Panel*, 1994, 137 et seq. (141). Sand, see note 84, 493; Handl, see note 77, 658; and I.F.I. Shihata, "Implementation, Enforcement and Compliance With International Environmental Agreements: Practical Suggestions in Light of the World Bank's Experience", *Geo.Int'l Envtl.L.Rev.* 9 (1997), 37 et seq. (47).

124 See the Resolution on Periodic Reporting adopted by the 29th General Conference of UNESCO, as transmitted to the World Heritage Committee at its 21st Session, Naples 1997, WHC-97/CONF.208/17, Annex V.

125 Downs, see note 89, 332 et seq., (342) (sequentially increased "depth of cooperation").

126 E.g., the Montreal Protocol's ban on trade with non-Parties — the "stick" of article 4 para.1, see note 19 — may also be viewed as a "carrot", since it promises access to inter-party trade; Sand, see note 2, 10 fn. 57; A. Enders and A. Porges, "Successful Conventions and Conventional Success: Saving the Ozone Layer", in: K. Anderson and R. Blackhurst (eds), *The Greening of World Trade Issues*, 1992, 134 et seq.