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## Financing environmental policies in the South: an analysis of the Multilateral Ozone Fund and the concept of Full Incremental Costs

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FS II 96-406

Financing Environmental Policies in the South

An Analysis of the Multilateral Ozone Fund  
and the Concept of »Full Incremental Costs«

by *Frank Biermann*

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## ABSTRACT:

The »Montreal Protocol on Substances that Deplete the Ozone Layer« obliges industrialised countries to reimburse developing countries — through new and additional resources — all agreed incremental costs incurred by them in their efforts to save the ozone layer. To this end, a Multilateral Fund was established in 1990. The Fund's decision-making procedures grant developing countries the same voting powers as industrialised countries — an almost revolutionary precedent in North-South relations. In this paper, the work of the Multilateral Ozone Fund since its inception is being analysed, with special emphasis on the development and implementation of the notion of »all agreed incremental costs« between industrialised and developing countries. Since comparable institutional settings have been stipulated in the more recent treaties on climate change and biological diversity, the paper's concluding section draws five »lessons« from ozone politics for other international environmental agreements, in particular the emerging climate regime.

## ZUSAMMENFASSUNG:

Das »Montrealer Protokoll über Stoffe, die zu einem Abbau der Ozonschicht führen« verpflichtet die Industrieländer, den Entwicklungsländern die vollen vereinbarten Mehrkosten zu ersetzen, die ihnen durch die Umsetzung des Protokolls entstehen — und zwar durch neue und zusätzliche Finanzmittel. Hierfür wurde 1990 ein Multilateraler Fonds eingerichtet, dessen Entscheidungsverfahren den Entwicklungsländern die gleichen Stimmrechte gewähren wie den Geberländern — ein nahezu revolutionär zu nennender Präzedenzfall in den Nord-Süd-Beziehungen. In diesem Paper wird die bisherige Tätigkeit des Multilateralen Fonds seit seiner Errichtung untersucht, wobei die genaue Umsetzung des Konzepts der »vollen vereinbarten Mehrkosten« im Mittelpunkt steht. Da vergleichbare institutionelle Festlegungen auch für die neueren Übereinkommen zum Schutz des Klimas und der Biodiversität getroffen wurden, werden am Ende des Beitrages aus den Erfahrungen der Ozonpolitik fünf potentiell relevante Lehren für weitere internationale Umweltvereinbarungen — insbesondere das entstehende Klimaschutzregime — gezogen.

## CONTENTS

Abbreviations	6
1 Introduction	7
2 The Multilateral Ozone Fund. History and Institutional Setting	9
<i>Outline</i>	9
<i>Financial transfers from 1985 to 1989</i>	12
<i>The establishment of the Multilateral Fund in 1990</i>	14
<i>The Executive Committee</i>	16
<i>The Implementing Agencies</i>	18
3 Who Contributes to the Fund, and How Much	20
4 How is the Money Being Disbursed	25
<i>Disbursal by the Fund</i>	25
<i>Bilateral co-operation</i>	30
<i>The role of the Global Environment Facility</i>	31
<i>How »environmentally effective« has the Fund worked</i>	32
5 Incremental Costs That Have Not Been Funded	34
<i>When capacities are expanded</i>	36
<i>When technology will be upgraded</i>	37
<i>When conversion projects result in savings and benefits</i>	39
<i>When certain ozone-depleting substances are not covered by Article 5 country obligations</i>	41
<i>When enterprises are owned by and/or export to industrialised countries</i>	41
<i>When domestic revenues or subsidies are lost</i>	44
<i>When plants have been recently established</i>	44
<i>When institutional strengthening or research is not essential for the phase-out of ozone-depleting substances</i>	45
<i>When projects are not »cost-effective«</i>	47

Recent Conflicts and Progress. Vienna 1995	48
<i>The conflict on new reduction obligations for developing countries</i>	48
<i>The issue of »technological dependence«</i>	51
<i>The issue of Russia</i>	53
<b>Conclusion. Lessons for the Climate Regime</b>	55
<i>First Lesson: Nearly all incremental costs have been paid</i>	55
<i>Second Lesson: Savings have been accounted for</i>	56
<i>Third Lesson: Co-operation overcame conflict</i>	56
<i>Fourth Lesson: North-South trading issues were effectively addressed</i>	57
<i>Fifth Lesson: Graduation and in-kind contributions proved to be acceptable</i>	57
<i>Resume</i>	58
Annex A — Legal Provisions on North-South Transfers for the Protection of the Environment	61
I TREATIES	61
1.1 Montreal Protocol on Substances that Deplete the Ozone Layer [as amended]	61
1.2 United Nations Framework Convention on Climate Change	65
1.3 United Nations Convention on Biological Diversity	69
1.4 United Nations Convention to Combat Desertification in those Countries Experiencing Serious Drought and/or Desertification, particularly in Africa	72
II OTHER LEGAL DOCUMENTS	76
II. 1 Stockholm Declaration on the Human Environment (1972)	76
11.2 Rio Declaration on Environment and Development (1992)	77
11.3 Non-Legally Binding Authoritative Statement of Principles for a Global Consensus on the Management, Conservation and Sustainable Development of all Types of Forests (1992)	78
11.4 Instrument for the Establishment of the Restructured Global Environment Facility (1994)	79
Annex B — List of Parties to the Ozone Treaties	81
Annex C — The Internet Roadmap to Ozone Politics	89



## ABBREVIATIONS

Article 5 countries	Developing countries that produce and consume less than 300 grams ODS per capita and year and enjoy certain Privileges under the Montreal Protocol on Substances that Deplete the Ozone Layer
BGBI	Bundesgesetzblatt (Official Collection of Laws and Treaties of the Federal Republic of Germany)
CEIT	Countries with economies in transition
CFC	Chlorofluorocarbon(s)
EC or EU	European Communities resp. Union
EFTA	European Free Trade Association
Executive Committee	Executive Committee of the Multilateral Fund for the Implementation of the Montreal Protocol on Substances that Deplete the Ozone Layer
GATT	General Agreement on Tariffs and Trade
GEF	Global Environment Facility (World Bank/UNEP/UNDP)
HCFC	Hydrochlorofluorocarbon(s)
ILM	International Legal Materials
Meeting of the Parties	Meeting of the Parties to the Montreal Protocol on Substances that Deplete the Ozone Layer
NGO	Non-Governmental Organisation Ozone-Depleting
ODP	Potential (CFC-11/-12 = 1,0)
ODS	Ozone-Depleting Substance(s) (weighted as ODP = 1, when used as aggregate)
OECD	Organisation for Economic Co-operation and Development
Open-Ended Working Group	Open-Ended Working Group of the Parties to the Montreal Protocol on Substances that Deplete the Ozone Layer
TEAP	Technology and Economic Assessment Panel
UNCED	1992 United Nations Conference on Environment and Development
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNIDO	United Nations Industrial Development Organization
WBGU	Wissenschaftlicher Beirat der Bundesregierung Globale Umweltveränderungen; German Advisory Council on Global Change

*Ist das nötige Geld vorhanden,  
ist das Ende meistens gut.*

BERT BRECHT, DREIGROSCHENOPER<sup>1</sup>

## L INTRODUCTION

At the 1992 »Earth Summit« in Rio de Janeiro, representatives from almost all developing and industrialised countries committed themselves, in their Declaration on Environment and Development, to »the goal of establishing a new and equitable global partnership«<sup>2</sup> This leitmotif has been reiterated in various recent treaties on global environmental protection, dealing with the protection of the global climate, the stratospheric ozone layer, biological diversity or the prevention of desertification. In these treaties, new concepts of law-making can be found, such as the principle of »common but differentiated responsibilities« new modes of decision-making, or new non-compliance procedures. Also without precedent are provisions that oblige industrialised countries to compensate »all agreed incremental costs« incurred by developing countries in their policies on global environmental problems.

1 »If the money is there, the end result is mostly good.« [from the final song of the Dreigroschenfilm (1930)].

2 Cf. the Preamble of the »Rio Declaration on Environment and Development«, adopted at the United Nations Conference on Environment and Development, 14 June 1992, in: 31 ILM 874 (1992); cf. *infra* p. 77.

The transfer of financial resources for the sustainable development of the South stands in the centre of this study. The question is: will the North really pay »all incremental costs« in the South, or will the qualification of »*agreed* incremental costs« turn into a loophole that will deprive the legal concept of its very substance and in effect release the North from substantial transfers?

Thinkers in the tradition of Political Realism would expect industrialised countries to neglect the wording and the spirit of the treaties; in this view, the North would seek by all means of power politics to pay as little as possible and to prevent any relative gains of developing countries by increased financial resources. Neoliberal Institutionalists might argue instead that the North will live up to its treaty obligations, because — owing to global ecological interdependence — industrialised countries have an interest in assisting the South in its efforts on environmental protection, and because industrialised countries have to preserve their REPUTATION AS FAIR NEGOTIATION PARTNERS, NOT LEAST IN THE SHADOW OF FUTURE ENVIRONMENTAL COLLECTIVE ACTION PROBLEMS, WHERE SOUTHERN CO-OPERATION WILL BE DECISIVE AGAIN. WRITERS INSPIRED BY NEOMARXISM, DEPENDENCY OR WORLD SYSTEM ANALYSIS WOULD EXPECT NORTHERN COUNTRIES TO UTILISE THE FINANCIAL TRANSFERS AND ENVIRONMENTAL REGIMES TO SUBJUGATE DEVELOPING COUNTRIES, TO MAXIMISE NORTHERN ECONOMIC PROFITS AND TO REACT TO THE ENVIRONMENTAL CRISIS BY »ECO-IMPERIALISM«.

Previously, such questions were staged in the realm of theoretical speculation: empirical analysis was not possible because all existing international environmental regimes established between industrialised and developing countries were too recent and too embryonic to allow for judgments based on observable facts. This situation has now changed: the Ozone Fund — precisely: the Multilateral Fund for the Implementation of the Montreal Protocol on Substances that Deplete the Ozone Layer — has been fully operational for roughly four years and will be replenished for the second time by the end of 1996. The main task of the Fund is »to meet all agreed incremental costs« of (certain) developing countries »in order to enable their compliance with the control measures« of the Montreal Protocol.

In this paper, the work of the Multilateral Fund since its inception will be analysed, with special emphasis on the development and implementation of the notion of »all agreed incremental costs«. First, the history and the institutional setting of the Fund will be briefly outlined. Then, I will analyse which countries contributed how much to the Fund, how the money was disbursed by the Fund's Executive Committee, and in particular: which projects were not financed by the Fund because they were judged as not containing »incremental costs«.

Afterwards, the

current main conflicts in the progressive development of the ozone layer protection regime will be outlined.

A study on the Multilateral Ozone Fund is not a purely academic exercise: the question of the funding of »all incremental costs« is — again — a prominent issue in the present negotiation of regimes on climate change and the protection of biological diversity,<sup>3</sup> and — as the Indian Minister for Environment and Forests, Kamal Nath, put it —

... the success or failure of the Fund would be an example for other Conventions, therefore, the Fund must live up to the hopes placed in it.<sup>4</sup>

Thus, in the concluding chapter I will attempt to formulate a number of »lessons« that might follow from the actual performance of the Multilateral Ozone Fund under its Executive Committee and the Meeting of the Parties.

The annex to this paper contains the central legal provisions on financial North-South transfers, as agreed upon, *inter alia*, in the Montreal Protocol on Substances that Deplete the Ozone Layer, the United Nations Framework Convention on Climate Change and the United Nations Convention on Biological Diversity, and in" other legal documents.

## 2 the multilateral ozone fund. history and institutional setting

### Outline

The international protection of the stratospheric ozone layer<sup>5</sup> is governed by the 1985 Vienna Convention on the Protection of the Ozone Layer<sup>6</sup> and its 1987

3 Both Rio Conventions require industrialised states to provide developing countries new and additional financial resources to meet their agreed full incremental costs of implementing the treaties. The 1994 Desertification Convention is less explicit. Reference to new and additional transfers is also being made in various non-binding documents, such as the 1972 Stockholm Declaration on the Human Environment. Cf. the texts in Annex A on pp. 61 et seq.

4 Quoted in: Executive Committee, Report of the 10th Meeting, UNEP/OzL.Pro./ExCom/10/40 of 1 July 1993, para. 4.

\* For the general problematique of stratospheric ozone depletion, cf. the Annual Reports of the German Advisory Council on Global Change 1994 (Bonn: Economica, 1995) and 1995 (Berlin: Springer,

Montreal Protocol on Substances that Deplete the Ozone Layer.<sup>7</sup> The reduction of emissions of chlorofluorocarbons (CFCs) and other ozone-depleting substances (ODS) became binding international law in 1989 according to a fixed timetable which has, since then, been further accelerated and extended in 1990,<sup>8</sup> 1992<sup>9</sup> and 1995.<sup>10</sup>

The ozone regime has received prolific academic attention: various writers analysed the history of ozone negotiations,<sup>11</sup> the ozone regime's model character as »dynamic international regime«,<sup>12</sup> the trade restrictive rules under Article 4 of the Protocol,<sup>13</sup> the regime's decision-making and implementation process<sup>14</sup> and the

1996); and NOAA/NASA/UNEP/WMO, Scientific Assessment of Ozone Depletion: 1994, Executive Summary, February 1995.

6 Convention on the Protection of the Ozone Layer, Vienna, 22 March 1985, in force 22 September 1988, in: BGBI II 1988, p. 901; 26 ILM 1529 (1987). As at 30 June 1996, 159 parties; cf. Annex B, *infra* pp. 81 et seq.

7 Protocol (to the 1985 Vienna Convention) on Substances that Deplete the Ozone Layer, Montreal, 16 September 1987, in force 1 January 1989, in: BGBI II 1988, p. 1015; 26 ILM 1550 (1987). As at 30 June 1996, 157 parties; cf. Annex B, *infra* pp. 81 et seq.

8 Cf. Adjustments and Amendment to the Montreal Protocol on Substances that Deplete the Ozone Layer, adopted at London, 29 June 1990, Amendment in force 10 August 1992, Adjustments 7 March 1991; in: BGBI II 1991, p. 1331; 30 ILM 537 (1991). As at 30 June 1996, 111 parties; cf. Annex B, *infra* pp. 81 et seq.

9 Cf. Adjustments and Amendment to the Montreal Protocol on Substances that Deplete the Ozone Layer, adopted at Copenhagen, 23-25 November 1992, Amendment in force 14 June 1994, Adjustments 22 September 1993; in: BGBI II 1993, p. 2182; 23 ILM 874 (1993). As at 30 June 1996, 57 parties; cf. Annex B, *infra* pp. 81 et seq.

10 Cf. Adjustments to the Montreal Protocol on Substances that Deplete the Ozone Layer, adopted at Vienna, 5-7 December 1995, in: Annex I-III of the Report of the Seventh Meeting of the Parties, Vienna, 5-7 December 1995, UNEP/OzL.Pro.7/12 of 27 December 1995.

11 Cf. in particular the comprehensive book written by the former US chief negotiator, Richard E. Benedick, *Ozone Diplomacy. New Directions in Safeguarding the Planet* (Cambridge/Mass.: Harvard University Press, 1991). For further analyses of the negotiation process, cf. Marian A. L. Miller, *The Third World in Global Environmental Politics* (Boulder, London: Lynne Rienner 1995), pp. 67-85; Alice Enders and Amelia Porges, »Successful Conventions and Conventional Success. Saving the Ozone Layer«, in: K. Anderson and R. Blackhurst (eds.), *The Greening of World Trade Issues* (New York etc.: Harvester Wheatsheaf, 1992), pp. 130-144; John Warren Kindt and Samuel Pyeatt Menefee, »The Vexing Problem of Ozone Depletion in International Environmental Law and Policy«, in: *Texas International Law Journal* 24:2 (1989), pp. 261-293; Edward A. Parson, »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* (Cambridge, Mass.: MIT Press, 1993), pp. 27-73; Detlef Sprinz and Tapani Vahtoranta, »The Interest-Based Explanation of International Environmental Policy«, in: *International Organization* 48: 1 (1994), pp. 77-105.

12 Cf. Thomas Gehring, *Dynamic International Regimes. Institutions for International Environmental Governance* (Frankfurt am Main: Peter Lang, 1994).

13 In general, cf. Carsten Helm, *Sind Freihandel und Umweltschutz vereinbar? Ökologischer Reformbedarf des GATT/WTO-Regimes* (Berlin: edition sigma, 1995); as regards the ozone regime, cf. Winfried Lang, »International Environmental Agreements and the GATT. The Case of the Montreal Protocol\*, in: *Wirtschaftspolitische Blätter* 1993 (3/4), pp. 354-372; Frank Biermann, *Saving the Atmosphere. International Law, Developing Countries and Air Pollution* (Frankfurt am Main: Peter Lang, 1995), pp. 132-145.

14 Cf. Owen Greene, »The Montreal Protocol. Implementation and Development in 1995«, in: J. Poole and R. Guthrie (eds.), *Verification 1996. Arms Control, Environment and Peacekeeping* (Westview Press, forthcoming); Biermann (*supra* note 13), pp. 121-124.

status of the ozone regime as part of international *ius cogens*, i.e. peremptory norms of international law from which no derogation whatsoever is allowed.<sup>15</sup>

In the context of North-South relations, an important feature of the 1987 Montreal Protocol is its differentiation of legal rules between developing and industrialised countries.<sup>16</sup> Article 5 allows all developing countries with an annual per capita consumption of controlled substances of less than 300 grams to delay the general reduction plan by ten years in order to meet »basic domestic needs«. The term »developing country« has not been further defined in the Protocol — at the first Meeting of the Parties, the UNEP Executive Director followed the — disputable — principle of self-definition and suggested to use the membership list of the Group of 77 plus Albania, China, Mongolia and Namibia (then represented by the UN). This was accepted by the parties »on an interim basis« and has remained — except for the reclassification of Turkey<sup>17</sup> — unchanged since then.<sup>18</sup>

Albeit, many developing countries refused to join the ozone regime despite the grace period unless (i) they were adequately compensated by industrialised countries for their ODS elimination programmes, (ii) the decision-making procedures" were made more equal, and (iii) the transfer of adequate technology on a non-commercial basis was assured.<sup>19</sup> Most important was, in particular for India and China, the issue of financial compensation, which will be discussed below.

15 Cf. Frank Biermann, »Common Concern of Humankind. The Emergence of a New Concept of International Environmental Law«, in: Archiv des Völkerrechts 34: 4 (1996), forthcoming. *Ius cogens* has been codified in Article 53 of the 1969 Vienna Convention on the Law of Treaties, affirming that a treaty is void if it conflicts with a »peremptory norm of general international law«, i.e. norms that are »accepted and recognized by the international community of States as a whole as a norm from which no derogation is permitted and which can be modified only by a subsequent norm of general international law having the same characters Accordingly reads Article 64: »If a new peremptory norm of international law emerges, any existing treaty which is in conflict with that norm becomes void and terminates.«

16 Cf. Helmuth Beck, Die Differenzierung von Rechtspflichten in den Beziehungen zwischen Industrie- und Entwicklungsländern. Eine völkerrechtliche Untersuchung für die Bereiche des internationalen Wirtschafts-, Arbeits- und Umweltrechts (Frankfurt am Main: Peter Lang, 1994), Biermann, (supra note 13), pp. 21-42.

17 Turkey was reclassified in 1991 as »developing country« because it is so classified by World Bank, OECD and UNDP.

18 Cf. Report of the Executive Director of the UNEP to the First Meeting of the Parties, UNEP/OzL.Pro.1/2 of 28 March 1989, para. 60-63; and Dec. I/12E of the First Meeting of the Parties, Helsinki, 2-5 May 1989, UNEP/OzL.Pro.1/5 of 6 May 1989.

19 Cf. Frank Biermann, »Nord-Süd-Politik als Schlüssel. Zehn Jahre Ozonpolitik«, in: Blätter für deutsche und internationale Politik 40: 12 (1995), pp. 1492-1500.

## Financial transfers from 1985 to 1989

The 1985 Vienna Convention contained merely vague provisions on co-operation in the legal, scientific and technical fields,<sup>20</sup> and the original 1987 Montreal Protocol hardly exceeded the Convention as regards financial transfers to developing countries. The industrialised countries merely had »to facilitate bilaterally or multilaterally the provision of subsidies, aid, credits, guarantees or insurance programmes to Parties that are developing countries for the use of alternative technology and for substitute products«<sup>21</sup> and »to co-operate in promoting technical assistance to facilitate participation in and implementation of this Protocols«<sup>22</sup> Developing countries could »submit a request to the secretariat for technical assistance for the purposes of implementing or participating in the Protocol«. <sup>23</sup> The First Meeting of the Parties to the Protocol was to review those requests for technical assistance and to begin deliberations on, inter alia, work plans to fulfil these obligations.<sup>24</sup>

This did not satisfy developing countries. India, China and many others urged instead that industrialised countries shall pay *all incremental costs* incurred by developing countries in their future ODS phase-out programmes. To this end, an *international fund* should be established — financed by *new and additional resources* from industrialised countries and »democratically« governed, i.e. without one-dollar-one-vote procedures as known from the World Bank.<sup>25</sup> This proposed fund under the Montreal Protocol — that was initially rejected by the North as a »simplistic idea«<sup>26</sup> — was seen by the South and UNEP also as nucleus and forerunner of a far larger endeavour: an International Climate Fund, which seemed even less acceptable for industrialised countries.<sup>27</sup>

20 1985 Vienna Convention, Article 4 (2): »[...] The Parties shall co-operate, consistent with their national laws, regulations and practices and taking into account in particular the needs of the developing countries, in promoting, directly or through competent international bodies, the development and transfer of technology and knowledge [...].«

21 1987 Montreal Protocol, Article 5 (3).

22 1987 Montreal Protocol, Article 10(1).

23 1987 Montreal Protocol, Article 10 (2).

24 1987 Montreal Protocol, Article 10 (3) and 11 (3X4).

25 Cf. for example the »Proposal for an International Fund for the Protection of the Ozone Layer« submitted by China to the First Meeting of the Parties, UNEP/OzL.Pro.I/CRP.2. China argued that the existing provisions were »very general and should be made more concrete in order to be implemented [and that] there should be an international fund [...] to finance the development and use of alternative substances and technology of CFCs substances that deplete the ozone layer«. Cf. in general Alexander Wood, »The Multilateral Fund for the Implementation of the Montreal Protocol«, in: *International Environmental Affairs* 5: 4 (1993), pp. 335-354; p. 338.

26 Quote from Nicholas Ridley — then UK Secretary of State for the Environment — who also observed that the compulsory nature of such a fund was unacceptable since it involved »a degree of sovereignty over sovereign nations.« Cf. the times of 4 May 1989.

27 Cf. the Report of the Informal Working Group of Experts on Financial Mechanisms for the Implementation of the Montreal Protocol, UNEP/OzL.Pro.Mech.I/Inf.1 of 16 August 1989, para. 20.

Without the financial mechanism, however, most developing countries were not prepared to join the Protocol, despite their ten-year grace period under Article 5.<sup>28</sup> India attended the 1987 Montreal Conference only as observer, without (formally) taking part in the negotiations.<sup>29</sup> China — though participating in the Montreal Conference — refused to sign the Protocol.<sup>30</sup> Owing to the projected ODS emissions' growth in many regions in the developing world,<sup>31</sup> industrialised countries had to acknowledge that without participation of the large developing countries, their own efforts would, in the long run, not suffice to protect the ozone layer. As Richard Benedick, the US chief negotiator, noted,

industrialized countries now realized that the promises of Montreal would have to be translated into tangible assistance to enable developing countries to forgo significantly expanded use of CFCs. [...] Industrialized-country governments both accepted a sense of responsibility for the situation and recognized that their own efforts to restore the ozone layer would be jeopardized if the developing world could not, or would not, cooperate. Helping developing nations to bypass CFC technology would be a good investment when measured against the potential costs of even greater damage to the ozone layer.<sup>32</sup>

Accordingly, the 1989 Meeting of the Parties assured »to seek to develop appropriate funding mechanisms to facilitate the transfer of technology and replacement of equipment at minimum cost to developing countries«,<sup>33</sup> and an open-ended working group was set up to elaborate the best modalities for such transfers,

28 Only 28 developing countries became parties to the Montreal Protocol before the London Meeting of the Parties (29 June 1990) — Bahrain, Brazil, Burkina Faso, Cameroon, Chile, Ecuador, Egypt, Fiji, Ghana, Guatemala, Jordan, Kenya, Malaysia, Maldives, Malta, Mexico, Nigeria, Panama, Singapore, Sri Lanka, Syria, Thailand, Trinidad and Tobago, Tunisia, Uganda, United Arab Emirates, Venezuela and Zambia.

29 India submitted detailed proposals for the institutional setting of the Fund and the costs to be covered, which had a strong influence on the position of other developing countries. Cf. the Communication of the Government of India to the Open-Ended Working Group of the Parties to the Montreal Protocol to Develop Modalities for Financial and Other Mechanisms to Enable Developing Countries to Meet the Requirements of the Montreal Protocol, UNEP/OzL.Pro.Mech.I/CRP.1 of 21 August 1989; and the formally proposed Amendment to the Protocol, UNEP/OzL.WG.I(2)/CRP.1 and CRP.2 of 28 resp. 29 August 1989. India acceded to the Vienna Convention on 18 March 1991 and to the Montreal Protocol (as amended in 1990) on 19 June 1992.

30 Particularly China's emphasis on her enormous scheduled and potential refrigerator industry is seen as having prompted the industrialised countries to the compromises in the 1987 and the subsequent 1990 London negotiations. China acceded to the Vienna Convention on 11 September 1989 and to the Montreal Protocol (as amended in 1990) on 14 June 1991.

31 In 1987, growth estimates (1980-2000) for Southern CFC use oscillated from 93 per cent (low estimates for refrigerators) to 500 per cent (high estimates for the growth of air conditioner consumption). Cf. D. F. Kohler, John Haaga and Frank Camm, *Projections of Consumption of Products Using Chlorofluorocarbons in Developing Countries* (Santa Monica/Calif: Rand Corporation, 1987).

32 Benedick (*supra* note 11), pp. 124 and 152. On the negotiation processes, cf. *ibid.*, pp. 148-162.

33 Helsinki Declaration on the Protection of the Ozone Layer, 2 May 1989, signed by the Governments and the European Communities represented at the First Meetings of the Parties to the Vienna Convention and the Montreal Protocol; Appendix I to the Report of the First Meeting of the Parties, Helsinki, 2-5 May 1989, UNEP/OzL.Pro.1/5; reprinted in 28 ILM 1335 (1989).



»including adequate international funding mechanisms which do not exclude the possibility of an international Fund«.<sup>34</sup>

### THE ESTABLISHMENT OF THE MULTILATERAL FUND IN 1990

At the 1990 Meeting of the Parties in London, industrialised countries agreed to the establishment of a Financial Mechanism for transfers of financial resources and non-ODS technology to developing countries. Those transfers shall

- (i) meet »all agreed incremental costs« of Article 5 countries,<sup>35</sup>
- (ii) be »additional« to other financial resources provided to developing countries,<sup>36</sup>
- (iii) as regards transfer of technology, be »expeditiously« and occur »under fair and most favourable conditions«.<sup>37</sup>
- (iv) be channeled either through a newly established Multilateral Fund for the Implementation of the Montreal Protocol or, to a lesser extent, by traditional multilateral, regional or bilateral financial assistance.<sup>38</sup>

The pivotal norm on North-South co-operation under the Montreal Protocol is Article 5, paragraph 5, stating that

developing the capacity to fulfil the obligations of the Parties operating under paragraph 1 of this Article to comply with the control measures [...] and their implementation by those same Parties will depend upon the effective implementation of the financial co-operation as provided by Article 10 and transfer of technology as provided by Article 10A.<sup>39</sup>

The duties of industrialised and developing countries are thus linked — if industrialised countries do not pay all incremental costs, developing countries do not have to comply with the ODS phase-out regime. Consequently, non-compliance procedures cannot be invoked against an Article 5 country when this country has notified the Secretariat that it cannot comply with its duties due to insufficient

<sup>34</sup> Dec. I/13 of the First Meeting of the Parties, Helsinki, 2-5 May 1989, UNEP/OzL.Pro.1/5.

<sup>35</sup> Montreal Protocol as amended in 1990, Article 10(1).

<sup>36</sup> Ibid.

<sup>37</sup> The Fund will in praxi implement industrialised country's duties under Article 10 A, i.e. »[to] take every practicable step [to ensure] (a) [t]hat the best available, environmentally safe substitutes and related technologies are expeditiously transferred to Parties operating under paragraph 1 of Article 5, and (b) [t]hat the transfers referred to in subparagraph (a) occur under fair and most favourable conditions [...]« since the costs of patent rights, licenses and royalties are to be borne by the Fund. Cf. Montreal Protocol as amended in 1990, Article 10 A.

<sup>38</sup> Montreal Protocol as amended in 1990, Article 10 (2).

<sup>39</sup> This provisions has been reiterated in Article 20 (4) of the 1992 Convention on Biological Diversity and Article 4 (7) of the 1992 Framework Convention on Climate Change; cf. *infra* pp. 61 et seq.

funding of its incremental costs — unless the Meeting of the Parties decides, with the consent of the majority of Article 5 countries, differently.<sup>40</sup>

Technically, the Multilateral Fund could be established only after the 1990 Amendment had entered into force. This would have delayed funding for some more years and thus also the phase-out policies in the South. Due to the deteriorating state of the stratospheric ozone layer, the parties agreed in 1990 on an Interim Financial Mechanism from 1 January 1991. By 1 January 1993, the Multilateral Fund was formally made operative, and all resources from the Interim Multilateral Fund were transferred.<sup>41</sup> The main task of the Fund is to »meet, on a grant or concessional basis as appropriate, and according to criteria to be decided upon by the Parties, the agreed incremental costs«<sup>42</sup> of Article 5 countries, and also to finance several clearing-house functions relating to technical co-operation, information exchange or training programmes.<sup>43</sup>

The Fund runs under the authority of the parties through an Executive Committee, which has to report annually to the Meeting of the Parties. The administration' of the Fund fundamentally differs from traditional aid: all decisions by the Meeting of the Parties relating to the financial mechanism shall be taken by consensus whenever possible but when no agreement can be reached, decisions will be adopted by a two-thirds majority vote which must represent a majority of Article 5 countries and a majority of the remaining parties.<sup>44</sup>

In fact, unlike the World Bank or the International Monetary Fund, the Multilateral Ozone Fund thus assigns industrialised and developing countries equal voting rights with effective veto powers for both sides. The Fund is not an institution of unilateral assistance but of universal co-operation: it is — as has been pointed out by members of the Executive Committee — »a unique exercise in global partnership because, for the first time, industrial and developing countries were participating as equal partners in financial decision-making.«<sup>45</sup>

40 Cf. Montreal Protocol as amended in 1990, Article 5 (6), (7) and (9).

41 Cf. Dec. IV/18 of the Fourth Meeting of the Parties, UNEP/OzL.Pro.4/15 of 25 November 1992.

42 The Fund itself does not bear »all« incremental costs, because some may also be compensated by bilateral assistance. Cf. *infra* page 30 et seq.; Montreal Protocol as amended in 1990, Article 10 (3) (a).

43 Montreal Protocol as amended in 1990, Article 10 (3) (b).

44 Cf. Montreal Protocol as amended in 1990, Article 10 (9). According to Article 2 (9) (c), the same quorum applies to decisions on the adjustment of the reduction schedule.

45 Cf. Executive Committee, Report of the 4th Meeting, UNEP/OzL.Pro.ExCom/4/13/Rev.2 of 18 November 1991, para. 13. Due to the insistence of the United States, Article 10 (10) of the 1990 London Amendment states that »[t]he financial mechanism set out in this Article is without prejudice to any future arrangements that may be developed with respect to other environmental issues.« However, the Global Environment Facility, restructured in 1994, has now decision-making procedures comparable to the 1990 Ozone Fund's.

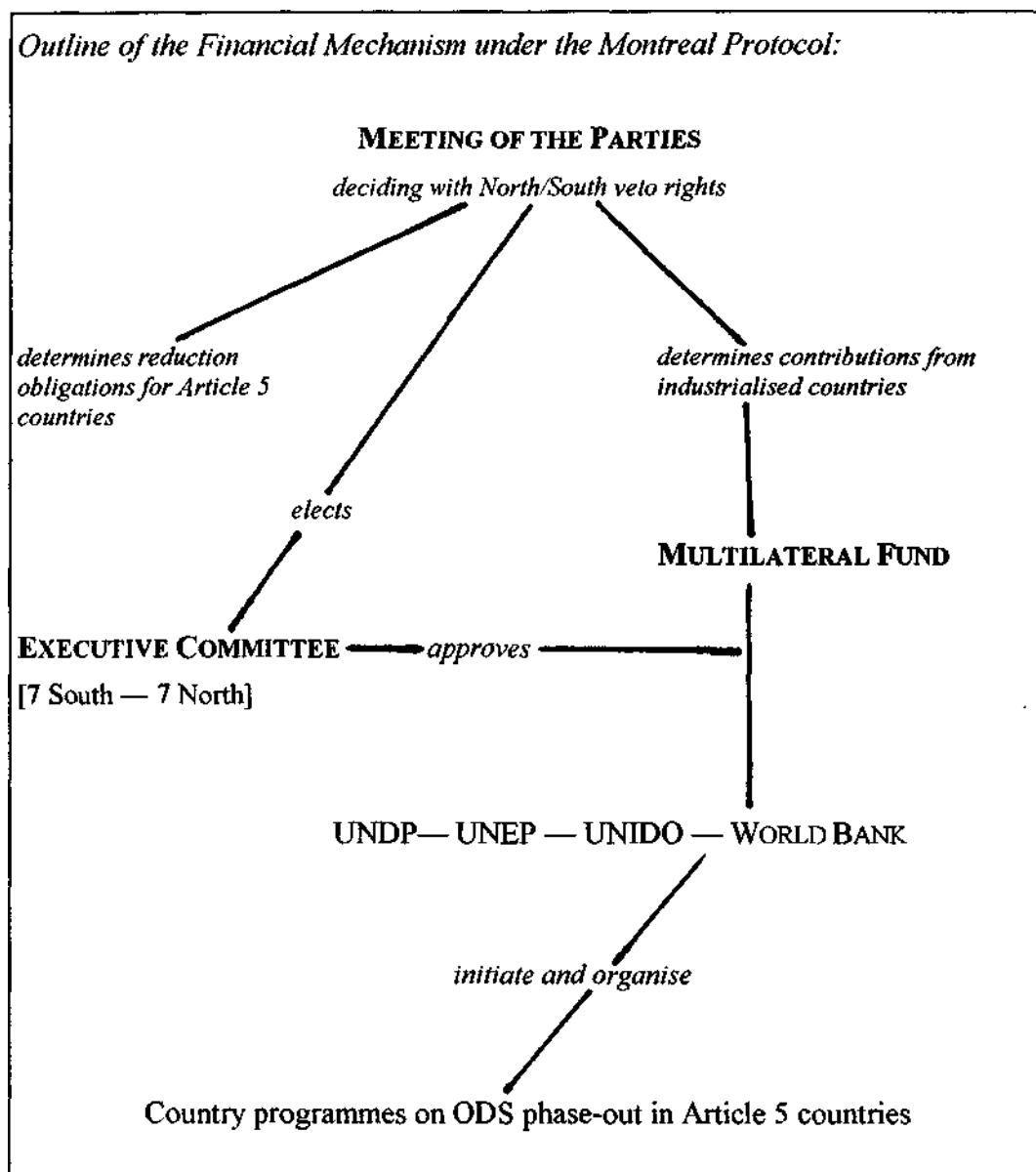
## THE EXECUTIVE COMMITTEE

This system of equal voting powers also governs the Executive Committee of the Multilateral Fund, which held its first meeting in September 1990 in Montreal.<sup>46</sup> The Committee consists of fourteen parties, seven from Article 5 countries and seven from the remaining parties. The Chair and Vice-Chair are selected from both groups, and the office of the Chair rotates on an annual basis. If no consensus can be reached, the Executive Committee will decide by a two-thirds majority vote that must include a simple majority in each of the two groups. Moreover, the Executive Committee members represent all geographic regions: Article 5 countries split up in two African, two Asian, two Latin American seats and one rotating, and the remaining seven seats are allotted to the United States, Japan, Eastern Europe, one to Canada, New Zealand or Australia, one to EFTA/Scandinavian countries and two to EEC member states (one big, one small).

In the course of its operations, the Executive Committee established several sub-committees — such as the standing Sub-Committee on Financial Matters, the Sub-Committee on Project Review or the Sub-Committee on Contributions in Arrears — all consisting of two Executive Committee members from Article 5 parties and two from the remaining parties. The Fund Secretariat provides the Executive Committee with administrative support; it is located in Montreal, where also the Meetings of the Executive Committee are regularly held.<sup>47</sup>

<sup>46</sup> Cf. Montreal Protocol as amended in 1990, Article 10 (5) and Article 4 of the Terms of Reference of the Executive Committee, Appendix n to Dec. H/8 of the Second Meeting of the Parties, contained in Annex IV of the Report of the Second Meeting of the Parties, UNEP/OzL.Pro.2/3 of 29 June 1990. When changing the interim status of the Fund to its permanent status, no modifications of the terms of reference for the Executive Committee were made; cf. Executive Committee, Report of the 7th Meeting, UNEP/OzL.Pro.ExCom/7/30 of 27 June 1992, para. 98-99 and Annex X to Dec. IV/18 of the Fourth Meeting of the Parties, UNEP/OzL.Pro.4/15 of 25 November 1992. The Executive Committee's Rules of Procedure are contained in Annex II to the Report of its 3rd Meeting, UNEP/OzL.Pro.ExCom/3/18/Rev.1 of 17 June 1991. The Committee's voting rules are stated in Rule 17 and reiterate Article 10 (9) of the Montreal Protocol as amended in 1990.

<sup>47</sup> The Fund Secretariat was established in Montreal at the invitation of Canada, which contributes to the costs of the Secretariat. When the decision on the Secretariat's location was taken, some members of the Executive Committee emphasised that this act should not be taken as a precedent for the establishment of possible future secretariats at another venue than Nairobi. Nonetheless, the Climate Convention Secretariat has been established in Bonn, i.e. again in an OECD country, which may indicate the unwillingness of industrialised countries to further strengthen the UNEP Nairobi headquarters. Cf. on the Fund's Secretariat: Executive Committee, Report of the 1st Meeting, UNEP/OzL.Pro.ExCom/1/2 of 17 December 1990, para.26.



In most meetings of the Executive Committee, non-governmental organisations — both business associations and environmental organisations — were represented as observers, which may indicate the high political importance of the Fund's work for these groups. In those rare cases where interventions by environmentalist NGOs have been reported, they favoured a restrictive interpretation of the concept of »incremental costs«,<sup>48</sup> which could be seen both as »pro-environment« — because the available money could be used more environmentally effective — but also as

48 Cf. for example the intervention of Greenpeace at the 8th Meeting, questioning whether all the costs of the Egyptian country programme »were in fact incremental«; the conversion costs in question were, nonetheless, eventually accepted by the Executive Committee. Cf. Executive Committee, Report of the 8th Meeting, UNEP/OzL.Pro.ExCom/8/29/Corr. 1 of 12 November 1992, para. 86-87.

»pro-Northern«, since developing countries would have to bear a higher cost in complying with the Protocol.<sup>49</sup>

### THE IMPLEMENTING AGENCIES

New institutions are costly; therefore, the 1990 Meeting of the Parties decided to create no new institutions for the practical implementation of the financial mechanism, but to rely on existing organisations of the United Nations family.<sup>50</sup> Currently, there are four implementing agencies:

The *United Nations Environment Programme* (UNEP) is the Treasurer of the Fund. It receives all financial contributions and transfers the money to other implementing agencies and recipient countries. Additionally, UNEP functions as a clearinghouse to assist Article 5 countries in identifying needs and facilitating technical co-operation, and also prepares country programmes for some smaller Article 5 parties. UNEP's main task, however, is research, training, information collection and dissemination, publication of newsletters etc.

The *United Nations Development Programme* (UNDP)<sup>51</sup> and the *World Bank* manage the development and implementation of country programmes.<sup>52</sup> Particularly the World Bank has been entrusted with the task to

assist in administering and managing the programme to finance the agreed incremental costs of activities enabling countries operating under paragraph 1 of Article 5 to comply with the control measures of the Montreal Protocol. The President of the World Bank shall be the Administrator of this programme, which shall operate under the authority of the Executive Committee.<sup>53</sup>

49 It should be noted that many representatives of the South — not only Southern dictatorial governments — view the increased role of NGOs with concern, because these organisations of the »global civil society« are often financed by Northern societies and are thus pursuing their own agenda, which is not necessarily the agenda of the people in developing countries. Cf. the most recent report by the South Centre, *For a Strong and Democratic United Nations. A South Perspective on UN Reform* (Geneva: South Centre 1996), pp. 213 et seq.

50 Cf. Montreal Protocol as amended in 1990, Article 10(5).

51 Officially, the UNDP »shall cooperate and assist in feasibility and pre-investment studies and in other technical assistance measures«. UNDP managed however to enlarge its role somehow from this rather meagre task. Cf. on UNDP's mandate under the Fund the »Implementation Guidelines and Criteria for Project Selection«, 1.3.2, in Annex HI to the Report of the 3rd Meeting of the Executive Committee, UNEP/OzL.Pro.ExCom/3/18/Rev.1 of 17 June 1991.

52 Cf. for a detailed evaluation of the work of the implementing agencies (as at December 1994), COWIconsult, *Study on the Financial Mechanism of the Montreal Protocol* (UNEP: Nairobi, 1995), para. 196 et seq. The consultants concluded that »there is now little functional distinction between the roles played by UNIDO, the World Bank and UNDP as implementing agencies although there are some differences by country and sector in their activities. These differences have arisen not through a planned approach to using the special expertise of each agency, but through competition between implementing agencies at country level and the development of certain comparative advantages which have emerged as each agency gained more experience with the Montreal Protocol« (ibid., para. 202, *emph. orig.*).

53 Cf. »Implementation Guidelines and Criteria for Project Selection«, 1.3.3, *supra* note 51.

*Table 1: Fund allocation and disbursement by implementing agencies (million US-\$)<sup>56</sup>*

	Funds allocated	% of total	Funds disbursed	disb./allocated
World Bank	199.87	47.4	43.30	21,6%
UNDP	124.56	29.5	34.50	27.7%
UNIDO	79.49	18.8	8.49	10.7%
UNEP	18.04	4.3	10.71	59.4%
TOTAL	421.86	100	96.99	

The World Bank regularly organised the preparation of country programmes for large ODS consumers and producers. Its newly created Ozone Operation Research Group provides external reviews of the country programmes and project preparation by independent experts. In 1992, also the *United Nations Industrial Development Organization* (UNIDO) has been invited to participate as fourth implementing agency.<sup>54</sup> UNIDO's tasks are now similar to UNDP's and the World Bank's, with a stronger emphasis on small-scale industrial operations in developing countries. All implementing agencies — except the World Bank<sup>55</sup> — charge the Fund 13 per cent support costs for their services.

By now, the Executive Committee has allocated nearly half of all funds to the World Bank (and roughly one third to UNDP, cf. Table 1). Nonetheless, this predominant role of the World Bank should not blur the fact that the *ultimate control* of the Fund's activities is retained by the Executive Committee, which must approve all country programmes and all individual projects with a volume exceeding 500.000 US-\$. Thus, developing countries as a group have an effective veto right over all Bank policies as regards the implementation of the Montreal Protocol — a rather unusual feature for the Washington-based Bretton Woods organisations.

Moreover, although the World Bank is ultimately controlled by industrialised countries, it is nonetheless a *bank* — i.e. a profit-oriented enterprise. Thus, the interests of the Bank's management and of developing countries converged to some extent as regards the definition of »incremental costs«, and the veto-right became increasingly important not for the South, but for the North. According to a 1994

<sup>54</sup> Representatives of UNIDO took part for the first time at the 7th Meeting of the Executive Committee. Cf. Executive Committee, Report of the 7th Meeting, UNEP/OzL.Pro.ExCom/7/30 of 27 June 1992, para. 36. The Agreement between UNIDO and the Executive Committee of 22 October 1992 is reprinted as Annex IV to the Report of the 8th Meeting of the Executive Committee, UNEP/OzL.Pro.ExCom/8/29/Corr.1 of 12 November 1992.

<sup>55</sup> The World Bank follows different procedures than the UN agencies and includes its management costs in the overall project costs, which are listed in detail in the project documentation. Cf., e.g., Executive Committee, Report of the 9th Meeting, UNEP/OzL.Pro.ExCom/9/20 of 12 March 1993, para. 58-60.

<sup>56</sup> Executive Committee, Report to the Seventh Meeting of the Parties, UNEP/OzL.Pro.7/7 of 25 November 1995, para. 44.

consultants' report, due to the competition between different implementing agencies — all eager to transfer as many funds as possible —, the industrialised countries became »concerned that the World Bank does not manage its Multilateral Fund operations sufficiently in trust. The continued lack of delegation of authority by the ExCom to the IAs [implementing agencies] is partly a result of their concerns in this area.«<sup>57</sup>

### 3 WHO CONTRIBUTES TO THE FUND, AND HOW MUCH

All parties to the Protocol not operating under Article 5 are obliged to contribute to the Fund. This includes the Western industrialised countries, most Eastern European countries, several successors of the Soviet Union and very few developing countries. During the 1989/1990 negotiations, several delegations had argued for the assessment of contributions on the basis of actual CFC consumption<sup>58</sup> — i.e. some sort of »international eco-tax« on ozone-depleting activities, which is again being debated for the climate regime.<sup>59</sup> However, when it became increasingly clear that industrialised countries would agree on the final elimination of CFC, an eco-tax on CFC consumption no longer appeared acceptable as financial basis for

57 Cf. COWIconsult, Study on the Financial Mechanism of the Montreal Protocol (UNEP: Nairobi, 1995), para. 367. Moreover, the World Bank's policy of »national execution« of projects — which is different from UNDP and UNIDO's centralised approach — resulted in added value to developing countries, such as capacity building, training of the personnel of national financial institutions, a greater sense of ownership by the national government, etc. On the other hand, the national execution approach tended to slow the speed of project implementation. Several developing countries have indicated that they prefer the World Bank implementation model. Cf. *ibid.*, para. 373 et seq.

58 In September 1989, for example, the Bureau of the Montreal Protocol still considered the assessment on the basis of consumption weighted by ODP as the »most preferable« solution. Cf. the Report of the Bureau's 1st Session, UNEP/OzL.Pro.Bur.1/2 of 29 September 1989, para. 8.

59 Contributions to an international Climate Fund could be based, at least partly, on criteria such as relative energy efficiency. Cf. for instance the proposals by Kirk R. Smith, Joel Swisher and Dilip R. Ahuja, »Who pays (to solve the problem and how much)?«, in: Peter Hayes and Kirk Smith (eds.), *The Global Greenhouse Regime. Who pays? Science, Economics and North-South Politics in the Climate Change Convention* (London, Tokyo, Paris: Earthscan Publications/United Nations University Press, 1993), pp. 70-98.

the conversion processes in the South. Instead, the adjusted<sup>60</sup> United Nations scale of assessment was chosen as basis of contributions.

The overall budget of the Fund is determined by the Meeting of the Parties based on recommendations by the Executive Committee. Since 1990 parties have regularly increased the budget, following the rapid process of ratification in developing countries after the 1990 London Amendment and the establishment of the Fund: the annual agreed contributions climbed from 53.31 million US-\$ in 1991 to 73.32 (1992), 112.90 (1993), 148.36 (1994), 148.14 (1995) and 151.67 million US-\$ in 1996.<sup>61</sup>

The compliance ratio of pledged/paid contributions for the Multilateral Ozone Fund is unusually high in comparison with other multilateral financial mechanisms, most notably to the regular United Nations budget. Although most industrialised countries were rather slow in actually paying their agreed contributions,<sup>62</sup> by the end of 1995, an average of 84 to 88 per cent of all pledged annual contributions has been transferred to the Fund. The total of all agreed contributions (incl. 1996) now stands at 687.70 million US-\$, of which — by 10 May 1996 — 444.20 million US-\$ have actually been paid.<sup>63</sup>

Most *Western industrialised countries* paid their share in full. The main contributors are — for the period 1991-1995 — the United States with 135.83 million US-\$, Japan with 76.78 million US-\$, Germany with 56.84 million US-\$, France

60 Because developing countries contribute to the United Nations, but not — if operating under Article 5 — to the Multilateral Fund, the UN scale of assessment is accordingly adjusted. Each country's contribution is determined for each fiscal year according to the number of parties and the annual classification of developing countries under Article 5.

61 Cf. Executive Committee, Report of the 19th Meeting, UNEP/OzL.Pro./ExCom/19/64 of 10 May 1996, Annex I; and the Report to the Seventh Meeting of the Parties, UNEP/OzL.Pro.7/7 of 25 November 1995, para. 15. Whereas the budget of the Interim Multilateral Fund was set in 1990 at 160 million US-\$ for the three-year period 1991-1993, the 1991 Meeting of the Parties raised it to 200 million for the three-year period from 1991-1993, following the accession of China (Dec. in/22). The 1992 Meeting committed the replenishment for the three-year period 1994-1996 by the order of 340-500 million US-\$ (Dec. IV/18). However, the Secretariat had suggested a 1994-1996 budget of 480-620 million US-\$; cf. in more detail Annex VIII to the Report of the 7th Meeting of the Executive Committee, UNEP/OzL.Pro.ExCom/7/30 of 27 June 1992. In 1993, the Fund's budget was fixed at 455 million US-\$, in addition to 55 million US-\$ having not been allocated in the period 1991-1993. Cf. Dec. V/9 of the Fifth Meeting of the Parties, Bangkok 17-19 November 1993, UNEP/OzL.Pro.5/12.

62 For instance, at the 4th Meeting of the Executive Committee, the UNEP Executive Director as the Fund's treasurer had to report that only 12.7 million US-\$ have been transferred to the Fund, far less than the total of agreed contributions of over 53 million US-\$. Apparently, some donor countries had legislative difficulties about making contributions without knowing in advance where their money would be used. Cf. Executive Committee, Report of the 4th Meeting, UNEP/OzL.Pro.ExCom/4/13/Rev.2 of 18 November 1991, para. 6-7. By October 1991, about 60 per cent of pledged contributions have still been outstanding; cf. Executive Committee, Report of the 5th Meeting, UNEP/OzL.Pro.ExCom/5/16 of 22 November 1991, Annex I.

63 The total paid/pledged ratio is here only 64.59 per cent, because the 1996 agreed contributions have been, by 10 May 1996, still largely in arrears. Cf. Executive Committee, Report of the 19th Meeting, UNEP/OzL.Pro./ExCom/19/64 of 10 May 1996, Annex I, page 2.



with 38.13 million US-\$ and Britain with 31.34 million US-\$.<sup>64</sup> The only »critical case« in this group is Italy — with total arrears of now 28 million US-\$ (or 79 per cent).<sup>65</sup> There are two reservations to be made, however: first, several industrialised countries usually pay their contributions with a time-lag of one or two years, thus making the Executive Committee's work unpredictable.<sup>66</sup> Second, several Western industrialised countries caused difficulties by paying their contributions not in cash, but in promissory notes. After lengthy disputes in the Executive Committee and its sub-committees, promissory notes are now being accepted despite remaining legal and technical problems.<sup>67</sup>

Likewise, all *developing countries consuming more than 300 grams ODS per capita and year* are obliged to contribute to the Fund. This applies currently (for 1995) only to five parties — Cyprus, Kuwait, Lebanon, Slovenia and the United Arab Emirates. A few others had been classified as non-Article 5 countries for some years until their per capita consumption fell again under the 300 grams ceiling.<sup>68</sup> Most non-Article 5 developing countries have not been enthusiastic regarding their financial obligations.<sup>69</sup>

The most »critical« contributors, however, are the so-called »*countries with economies in transition*« (CEIT), i.e. the former group of socialist countries: 76 per cent of all outstanding contributions for the period 1991-1994 is attributed to CEIT<sup>70</sup>, and still 61 per cent if 1995 is included.<sup>71</sup> Their situation is highly com-

64 Cf. Executive Committee, Report of the 18th Meeting, UNEP/OzL.Pro./ExCom/18/75 of 24 November 1995, Annex I, page 4.

65 Italy notified the Executive Committee in May 1996 that it will soon be in a position to pay its outstanding contributions. Cf. Executive Committee, Report of the 19th Meeting, UNEP/OzL.Pro./ExCom/19/64 of 10 May 1996, para. 7 (c).

66 This is partly caused by institutional disorganisation in those countries since activities related to the Fund are commonly divided among the Ministry of the Environment, the Ministry of Finance and the External Affairs Ministry. The United States is the only industrialised country with an interdepartmental Ozone Co-ordinator whose full-time responsibility is the management of Multilateral Fund activities.

67 Cf. Executive Committee, Report of the 10th Meeting, UNEP/OzL.Pro./ExCom/10/40 of 1 July 1993, para. 14-19. Although the World Bank accepted promissory notes in principle, one technical problem — among others — was the money transfer from one implementing agency to another. From 1995 onwards, countries paying their contributions with promissory notes are not shown in the documents as being in arrears. Cf. Executive Committee, Report of the 13th Meeting, UNEP/OzL.Pro./ExCom/13/47 of 27 July 1994, para. 18.

68 This includes Bahrain, Brunei Darussalam, Malta, the Republic of Korea, Saudi Arabia and Singapore. The United Arab Emirates did not provide any data and have thus been classified on the basis of estimates. Should readers familiar with the living standards in Bahrain or Brunei Darussalam — i.e. the number of air-conditioning units per capita — wonder about those countries' status under the Protocol, it is to be noted that the classification is solely based on the parties' own reports on their per capita CFC consumption which are questioned neither by the Ozone Secretariat nor by the Meeting of the Parties. Cf. On the status of Parties the Report of the Executive Director to the Seventh Meeting of the Parties, UNEP/OzL.Pro.7/3 of 21 August 1995, para. 11.

69 Their total contributions are, however, negligible and mostly less than 1 million US-\$. Cf. Executive Committee, Report of the 19th Meeting, UNEP/OzL.Pro./ExCom/19/64 of 10 May 1996, Annex I.

70 Executive Committee, Report to the Seventh Meeting of the Parties, UNEP/OzL.Pro.7/7 of 25 November 1995, para. 16. For the period from 1991 to 1994, Western industrialised countries accounted for

plex.<sup>72</sup> Of all 27 CEIT, 22 are completely new states, i.e. successors of the former Soviet Union, Yugoslavia and Czechoslovakia. This complicates — among many other problems — the exact calculation of the respective ODS consumption and production data for 1986, the base year for the reduction schedule of the 1987 Montreal Protocol.

Several CEIT have not yet ratified the Protocol, mainly due to difficult internal situations. Azerbaijan, for example, could not succeed to the Protocol before June 1996 because the State Committee for Ecology had not obtained the resources necessary to translate (!) the Vienna Convention and the Montreal Protocol text from Russian into Azeri, the only official language to be used in Parliament. The problems of the State Committee for Ecology in this respect became more complex by the fact that there was only one single copy of the Vienna Convention and the Protocol text in the country, which apparently could not be made available to the State Committee for Ecology!<sup>73</sup>

Whereas some CEIT — Romania and the Yugoslavian successor states except Slovenia — qualify as developing countries operating under Article 5, Belarus,<sup>74</sup> Bulgaria, the Czech Republic, Hungary, Poland, the Russian Federation, Slovakia, the Ukraine and Uzbekistan must comply in full with the Protocol's provisions. Already in 1992, CEIT parties indicated that they were facing »temporary difficulties« in making contributions in convertible currency to the Multilateral Fund.<sup>74</sup> By May 1996, most of these parties were in arrears with their contributions, in particular the Russian Federation with 54.81 million US-\$ (100% of total 1991-1996 contributions), and the Ukraine with 12.84 million US-\$ (93.9%).<sup>75</sup>

There have been two reactions by the Executive Committee: first, some representatives in the Committee suggested to increase public pressure on the CEIT, e.g. by publishing the correspondence with the Treasurer and the countries with contributions in arrears. However, the Executive Committee rejected this proposal

21.77 per cent, developing countries not operating under Article 5 for 1.78 per cent and economies in transition for 76.45 per cent of all outstanding contributions.

71 Own calculations based on: Executive Committee, Report of the 19th Meeting, UNEP/OzL.Pro./ExCom/19/64 of 10 May 1996, Annex I.

72 Cf. for the following: UNEP Technology and Economic Assessment Panel [TEAP] Ad-Hoc Working Group on CEIT Aspects, Assessment of Basic Problems Confronting Countries with Economies in Transition in Complying with the Montreal Protocol (UNEP: Nairobi, November 1995).

73 Cf. UNEP Technology and Economic Assessment Panel, *supra* note 72, Annex 2. The official translation will cost only 2000-3000 US-\$.

74 Cf. Dec. IV/21 on »Temporary difficulties encountered by Hungary, Bulgaria and Poland« of the Fourth Meeting of the Parties, Copenhagen, 23-25 November 1992, UNEP/OzL.Pro.4/15 of 25 November 1992.

75 Cf. Executive Committee, Report of the 19th Meeting, UNEP/OzL.Pro./ExCom/19/64 of 10 May 1996, Annex I page 3.

but decided to keep at least the list of outstanding contributions publicly available and to urge non-governmental organisations »to play their role in informing the public regarding the 'arrears' situation«.<sup>76</sup>

Instead, the Executive Committee explored new ways in addressing the situation of CEIT, following Soviet (resp. Russian) proposals to contribute to the Fund not in hard currency, but *in kind* — i.e. by the provision of non-ODS compressors, of substitute technologies or of training and servicing equivalent to the pledged amount of convertible currency.<sup>77</sup> In 1992, the Meeting of the Parties requested the Committee and the Fund Secretariat to provide special assistance to Hungary, Bulgaria and Poland in identifying possible ways of making such in-kind contributions,<sup>78</sup> and in the following year, the newly established Sub-Committee on Contributions in Arrears identified Belarus, Bulgaria, the Czech Republic, Hungary, the Russian Federation, the Slovak Republic and the Ukraine as CEIT parties that could possibly use in-kind contributions to meet outstanding contributions.<sup>79</sup> Most CEIT accepted this proposal in principle.<sup>80</sup>

Initially, the Fund had more money on its account than projects were in the pipeline. By the end of 1994, this situation changed when the available funds exceeded the projects proposed by Article 5 countries and by the implementing agencies. This is partly a result of the success of the Fund in the South — more and more developing countries had ratified the Protocol and submitted country programmes, which eventually exceeded the funds agreed upon under the 1994-1996 work programme. Secondly, several Eastern European countries are in arrears, as noted above. As a consequence, at its December 1994 Meeting the Executive Committee had to acknowledge that the approval of all projects recommended by the Sub-Committee on Project Review would result in the shortfall in

<sup>76</sup> Cf. Executive Committee, Report of the 14th Meeting, UNEP/OzL.Pro./ExCom/14/1 of 30 September 1994, para. 28-30.

<sup>77</sup> First proposals for the acceptance of in-kind proposals were brought forward in early 1991 by the representatives of the (then) Soviet Union. The World Bank management was initially not willing to accept in-kind contributions. Soviet diplomats made clear, however, that they would either contribute in-kind or not at all. Cf. Executive Committee, Report of the 2nd Meeting, UNEP/OzL.Pro./ExCom/2/5/Rev.1 of 15 April 1991, para. 17; Executive Committee, Report of the 4th Meeting, UNEP/OzL.Pro./ExCom/4/13/Rev.2 of 18 November 1991, para. 31; Executive Committee, Report of the 5th Meeting, UNEP/OzL.Pro./ExCom/5/16 of 22 November 1991, para. 57.

<sup>78</sup> Cf. *supra* note 74. This was subsequently debated by the Sub-Committee on Financial Matters. Cf. Executive Committee, Report of the 10th Meeting, UNEP/OzL.Pro./ExCom/10/40 of 1 July 1993, para. 145-154.

<sup>79</sup> Cf. Executive Committee, Report of the 10th Meeting, UNEP/OzL.Pro./ExCom/10/40 of 1 July 1993, Annex VI.

<sup>80</sup> Poland even announced in 1993 to pay its contributions in full. Hungary suggested to pay in kind by implementing projects in the refrigeration sector in Article 5 countries. Cf. Executive Committee, Report of the 10th Meeting, UNEP/OzL.Pro./ExCom/10/40 of 1 July 1993, para. 147 and Annex V.

funds amounting to almost ten million US-\$.<sup>81</sup> Due to this shortage of funds, the Chinese delegation offered to delay the implementation of some projects in China,<sup>82</sup> and the Executive Committee had to agree on general criteria for the »prioritization« of eligible projects.<sup>83</sup> As I will illustrate more detailed further below, have these short-term financial difficulties and uncertainties caused the developing countries' firm opposition to any acceleration of their phase-out duties at the 1995 Meeting of the Parties in Vienna, when the general review of Article 5 was on the agenda.

## 4 HOW IS THE MONEY BEING DISBURSED

### *Disbursal by the Fund*

Developing countries operating under Article 5 have the right to request the reimbursement of all agreed incremental costs by the Fund. By September 1995, this status applied to 101 parties;<sup>84</sup> only Cyprus, Kuwait, Lebanon, Slovenia and the United Arab Emirates did not qualify as Article 5 countries and have thus to contribute themselves to the Fund.<sup>85</sup> Although Article 5 countries are legally not yet required to reduce ODS consumption or production, they are encouraged to elaborate »country programmes« on advanced ODS phase-out, either autonomously or in close co-operation with one of the implementing agencies. Those country pro-

81 Cf. Executive Committee, Report of the 15th Meeting, UNEP/OzL.Pro./ExCom/15/45 of 16 December 1994, para. 21.

82 Cf. Executive Committee, Report of the 15th Meeting, UNEP/OzL.Pro./ExCom/15/45 of 16 December 1994, para. 88-89.

83 Cf. on the debate in the Executive Committee: Executive Committee, Report of the 16th Meeting, UNEP/OzL.Pro./ExCom/16/20 of 17 March 1995, para. 20 et seq.

84 Of those, 29 were only temporarily classified as Article 5 countries, because they had not submitted complete data on their ODS consumption and production, but were estimated as consuming less than 300 grams ODS per capita and year.

85 Other developing countries, such as the Republic of Korea or Singapore, had been subjected to the general reduction schedule for some time, but have now been reclassified as Article 5 countries due to the successful reduction of their per capita ODS consumption to less than 300 grams. Cf. Report of the Secretariat on Information Provided by the Parties in Accordance With Articles 4, 7 and 9 of the Montreal Protocol and the Report of the Implementation Committee, UNEP/OzL.Pro.7/6 of 25 September 1995, para. 30.

grammes must contain, *inter alia*, a review of recent ODS production, imports and use by the main producers, users and consumers, including links to transnational corporations, as well as descriptions of the institutional framework, a statement of strategy for implementation of the Protocol, an action plan encompassing investment and technical assistance projects, a timetable for each activity and — last but not least — a budget and financing programme for all those activities.<sup>86</sup>

When the Executive Committee approved a complete country programme, all ensuing costs less than 500,000 US-\$ will be borne by the Multilateral Fund (when approved by the implementing agencies). Projects with costs exceeding 500,000 US-\$ must be approved by the Executive Committee in their own right.<sup>87</sup> All funds for technical assistance, pre-investment activities and — in general — investment projects are provided as *grant* or in certain circumstances as in-kind support.<sup>88</sup> By March 1993, the Committee had endorsed nine country programmes and 150 different activities including 30 investment projects and nine demonstration projects in 40 countries, altogether resulting in the elimination of 31,000 ODS (mostly CFC).<sup>89</sup>

The current work of the Multilateral Fund is based on the three-year plan for the period from 1994 to 1996. Its actual implementation is not yet fully assessable, and the pledged budget — 510 million US-\$ for the three-year period — has not yet been contributed in full. Assuming complete implementation, the 1994-1996 work plan is expected to eliminate about 46,600 tonnes ODS consumption and 17,000 tonnes ODS production per year, amounting to a total elimination of approximately 30 per cent of all ODS in Article 5 countries (cf. Table 2). By the end of 1995, 59 country programmes had been prepared and approved by the Committee, covering an estimated consumption/production of 142,200 tonnes ODS.<sup>90</sup>

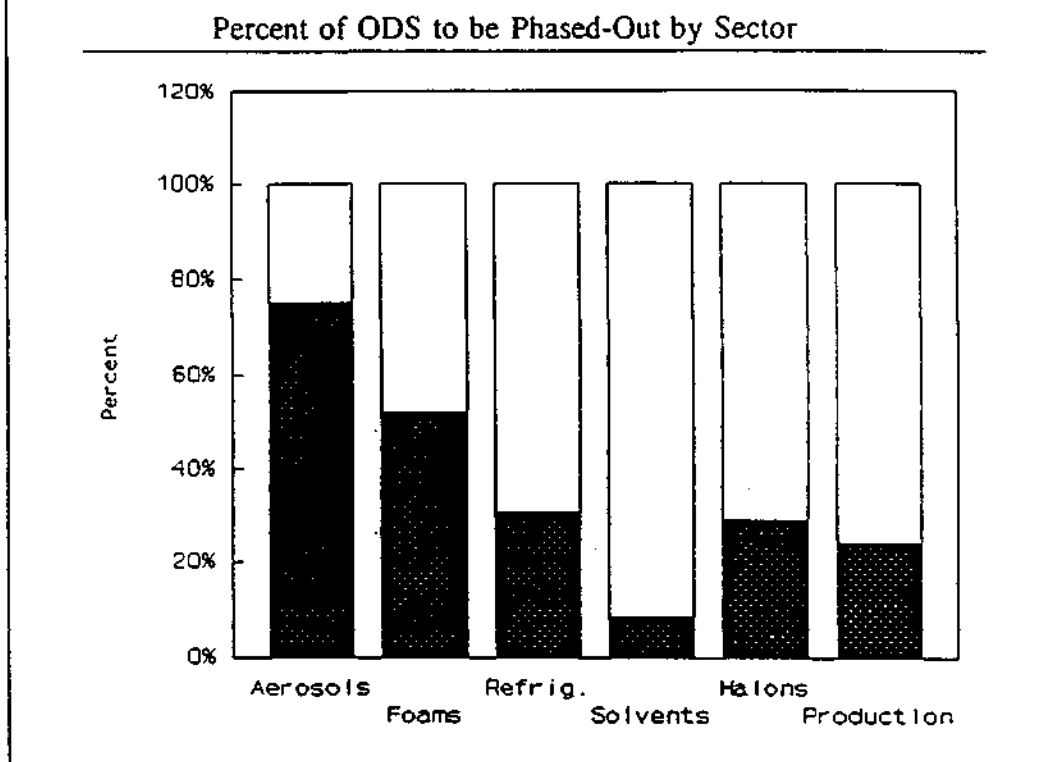
86 Cf. in more detail »Implementation Guidelines and Criteria for Project Selections n.-VI., in: supranote 51; and the »Guidelines for Presentation of Projects and Criteria for Project Approval as contained in Annex III to the Report of the 7th Meeting of the Executive Committee, UNEP/OzL.Pro.ExCom/7/30 of 27 June 1992.

87 Cf. »Implementation Guidelines and Criteria for Project Selection«, D.3.I., supra note 51.

88 Where investment projects have payback periods of less than two years, »financing may take the form of highly concessional loans«. However, decisions on this question have to be made by the Executive Committee, i.e. with the consent of Article 5 countries. Cf. »Implementation Guidelines and Criteria for Project Selection«, supra note 51, V.1-3.

89 Cf. Executive Committee, Report of the 9th Meeting, UNEP/OzL.Pro./ExCom/9/20 of 12 March 1993, para. 3.

90 Cf. Executive Committee, Report to the Seventh Meeting of the Parties, UNEP/OzL.Pro.7/7 of 25 November 1995, para. 31.

*Table 2: Projected ODS reduction in Article 5 countries by 1996<sup>91</sup>*

Many projects under the 1994-1996 plan are more costly than under the 1991-1993 plan, because more expensive sectors have now been included. About 80 per cent of the 1994-1996 budget relates to activities in three sectors: refrigeration and cooling (US-\$ 150 million), foam (US-\$ 114 million) and the production of substitutes (US-\$ 100 million) (cf. Table 3).<sup>92</sup>

Most funds are spent on investment projects that directly address the conversion to non-ODS or less-ODS consuming products or production processes.<sup>93</sup> Along with investment projects, the Executive Committee approved limited funds for »institutional strengthening«, for instance activities to enable national agencies to effectively implement ODS reduction projects and to co-operate with the Execu-

91 The bar graph shows the targeted phase-out tonnage for the 1994-1996 period. Cf. Executive Committee, Report of the 10th Meeting, UNEP/OzL.Pro./ExCom/10/40 of 1 July 1993, Annex H, para. 12.

92 Cf. Executive Committee, Report of the 10th Meeting, UNEP/OzL.Pro./ExCom/10/40 of 1 July 1993, Annex u, para. 13.

93 More than 90 per cent of all funds spent on investment projects occur in the foam and refrigeration sector, other sectors include the conversion of aerosols, solvents and the phase-out of halons as fire-extinguishers. As practical and illustrative example, cf. for instance (on solvents) David C. O'Connor, »Solvent Cleaning in the Asian Electronics Industry. The Search for Alternatives to CFC-113 and Methyl Chloroform (1,1,1-trichloroethane)«, in: *Industry and Environment* Nov./Dec. 1991, pp. 12-23.

*Table 3: Three-Year Work Plan 1994-1996<sup>97</sup>*

	Annual consumption reduction (ODS t)	Annual production reduction	Cost (million US-\$) (ODS t)
Foam (various)	18200		114.25
Aerosols	12000		20.00
Solvents	5000		60.00
Commercial and industrial refrigeration	4000		26.00
Domestic refrigeration manufacturing	2500		87.00
Halon	2300		10.00
Mobile air conditioning	1700		20.00
- Chillers	900		17.00
Production of chemical substitutes		17 000	100.00
Institutional strengthening and other costs			55.30
<b>TOTAL</b>	<b>46600</b>	<b>17 000</b>	<b>509.55</b>

tive Committee, the Fund Secretariat and the implementing agencies.<sup>94</sup> Moreover, the Fund financed various projects on technical assistance, such as the preparation of country programmes and single projects — workshops, training programmes and the development of phase-out strategies for individual sectors.<sup>95</sup>

Apart from consumption of ODS, there are currently six Article 5 countries also *producing* controlled substances, with a total production capacity of about 156,000 tonnes. However, in 1991 only 91,000 tonnes have actually been produced, of which were 78 per cent CFC-11 and -12. Frequently, CFC-117-12 producing plants can be converted to the production of substitute substances such as HCFC-22 with low incremental costs. Some factories, however, must be scrapped and replaced by new facilities. The total costs of projects addressing the production of chemical substitutes in all six producer countries in the South have been estimated — for the period 1994 to 1996 — as 100 million US-\$, which would result in the elimination of 17,000 tonnes CFC per year.<sup>96</sup>

<sup>94</sup> By November 1995, a total of 11 million US-\$ had been spent on institutional-strengthening projects in all 59 developing countries with country programmes at that time. Cf. Executive Committee, Report to the Seventh Meeting of the Parties, UNEP/OzL.Pro.7/7 of 25 November 1995, para. 35.

<sup>95</sup> By the end of 1995, the Executive Committee had approved almost 190 training programmes at the national, regional and global levels, with costs of nearly 10 million US-\$. Cf. Executive Committee, Report to the Seventh Meeting of the Parties, UNEP/OzL.Pro.7/7 of 25 November 1995, para. 38.

<sup>96</sup> Cf. Executive Committee, Report of the 10th Meeting, UNEP/OzL.Pro./ExCom/10/40 of 1 July 1993, Annex II, para. 122-127.

<sup>97</sup> Cf. Executive Committee, Report of the 10th Meeting, UNEP/OzL.Pro./ExCom/10/40 of 1 July 1993, Annex II, para. 9.

All implementing agencies had initial problems with the disbursement of funds allocated to them by the Executive Committee, which was exacerbated by the problems of the Fund Secretariat to get organised (it took one year to hire all professional staff) and the slow work in the Executive Committee, which had in many cases first to refine the eligibility criteria before projects and programmes could be approved.<sup>98</sup> For example, in December 1994, of all 781 Multilateral Fund projects that had been approved at that time, only one fourth had been fully completed. Of the total of 275 approved investment projects — accounting for 75 per cent of total funds then allocated —, only 10 per cent had been completed." Due to the delays, from 20,500 ODP tonnes scheduled for elimination — on an annual basis —, only 3,000 ODP tonnes have actually been phased out by December 1994.<sup>100</sup> Consequently, a Danish consultant firm, acting on behalf of the Executive Committee, arrived at the conclusion that »the essential issue facing the Financial Mechanism as an institutional system is less its capacity to develop, review and approve projects than its ability to implement approved projects in a timely manner.«<sup>101</sup> The consultants put the blame in particular on the implementing agencies, especially the World Bank, which was recommended to cancel its policy of »national execution« and to embark on centralised project implementation, especially in low- and medium ODS-consuming countries.<sup>102</sup> Those delays, however, are no surprise: Both the agencies and the Committee did pioneering work and set precedents in international relations, agreeing on new forms of North-South cooperation with entirely new decision-making formula; and the tedious experiences gained in the process of implementing the Montreal Protocol will certainly be of use when addressing the climate problem and other, even more complicate issues.

Furthermore, the implementing agencies managed to shorten their time-lag after having better organised their internal work programmes. In 1994, the Executive Committee authorised a »streamlined mechanism« for the approval of projects under 500,000 US-\$, which had been proposed by the United States and is expected to considerably expedite the disbursement of funds.<sup>103</sup>

98 Cf. Wood (supra note 25), pp. 344 et seq.

99 Cf. COWIcomult, Study on the Financial Mechanism of the Montreal Protocol (UNEP: Nairobi, 1995), para. 19.

100 Ami, para. 31.

101 Ibid., para. 47.

102 Ibid., para. 373 et seq.

103 This mechanism is outlined in more detail in: Executive Committee, Report of the 13th Meeting, UNEP/OzL.Pro./ExCom/13/47 of 27 July 1994, para. 68-70.



### *Bilateral co-operation*

The Multilateral Fund does not finance all incremental costs covered by the Protocol's Financial Mechanism. Some projects are funded by bilateral co-operation programmes which must, however, be endorsed by the Executive Committee. The provision of bilateral assistance is sometimes more advantageous for industrialised countries than multilateral aid, especially when products or technologies of donor countries are exported. For the same reason, developing countries regularly prefer multilateral co-operation programmes. At the 1990 London Conference, both groups accepted, as a compromise, that

[b]ilateral and, in particular cases agreed by a decision of the Parties, regional co-operation may, up to a percentage and consistent with any criteria to be specified by decision of the Parties, be considered as a contribution to the Multilateral Fund, provided that such co-operation, as a minimum:

- (a) Strictly relates to compliance with the provisions of this Protocol;
- (b) Provides additional resources; and
- (c) Meets agreed incremental costs.<sup>104</sup>

Furthermore, the maximum amount of bilateral co-operation was limited to twenty per cent of a non-Article 5 country's total contributions.<sup>105</sup> Nonetheless, bilateral projects played only a marginal role:<sup>106</sup> the total costs of all bilateral co-operation programmes amount to only 13 million US-\$ or 3 per cent of all contributions to the Fund.<sup>107</sup> As largest contributor to the Fund, the United States have shown the greatest interest in bilateral co-operation,<sup>108</sup> followed by Canada and Germany,<sup>109</sup>

<sup>104</sup> Cf. Montreal Protocol as amended in 1990, Article 10 (6).

<sup>105</sup> Cf. the »Terms of Reference for the Interim Multilateral Fund«, para. 8, adopted at the Second Meeting of the Parties (Dec. II/8); cf. Appendix IV to Annex IV of the Report of the Second Meeting of the Parties, UNEP/OzL.Pro.2/3 of 29 June 1990.

<sup>106</sup> Cf. on the Committee's debates on this issue, e.g.: Executive Committee, Report of the 5th Meeting, UNEP/OzL.Pro.ExCom/5/16 of 22 November 1991, para. 52-55 and Annex ffl (contained detailed rules of procedure). Cf. also the detailed »Guidelines for Cost Assessment of Bilateral and Regional Activities« as contained in Annex IV to the Report of the 7th Meeting of the Executive Committee, UNEP/OzL.Pro.ExCom/7/30 of 27 June 1992.

<sup>107</sup> For the years 1994 and 1995, 5.7 million US-\$ of bilateral contributions have been credited by the Executive Committee, covering 76 bilateral projects from training workshops to investment projects. Cf. Executive Committee, Report to the Seventh Meeting of the Parties, UNEP/OzL.Pro.7/7 of 25 November 1995, para. 17-18.

<sup>108</sup> The USA contributed 10.0 million US-\$ as bilateral assistance, i.e. 5.75 per cent of their total contributions. Cf. Executive Committee, Report of the 19th Meeting, UNEP/OzL.Pro./ExCom/19/64 of 10 May 1996, Annex I, page 3.

<sup>109</sup> For instance, Germany was allowed to set off the costs for the participation of experts from developing countries in a CFC conference held in Germany in January 1992 — amounting to 18,000 US-\$ — as bilateral contribution against its total contribution. Cf. Executive Committee, Report of the 7th Meeting, UNEP/OzL.Pro.ExCom/7/30 of 27 June 1992, para. 20-21. Of its total agreed contributions 1991-1996 of 72.59 million US-\$, Germany contributed 1.36 US-\$ million via bilateral assistance and 20.77 million US-\$ via promissory notes. Cf. Executive Committee, Report of the 19th Meeting, UNEP/OzL.Pro./ExCom/19/64 of 10 May 1996, Annex I, page 3.

and minor bilateral contributions by some other countries. However, some industrialised countries now attempt to enlarge the share of bilateral assistance of their overall contributions to the Fund — in particular Germany, which considers bilateral assistance as something that »will help promote new non-ODS technologies being developed in Germany and is intended to prove they can be utilized in Article 5 countries as well.«<sup>110</sup>

### THE ROLE OF THE GLOBAL ENVIRONMENT FACILITY

Limited funds are also provided by the Global Environment Facility (GEF), a joint undertaking of World Bank, UNDP and UNEP, established in 1991.<sup>111</sup> However, although GEF projects on ODS phase-out are implemented by the same agencies as Multilateral Fund projects, there exist no legal or structural links between both entities.<sup>112</sup> Whereas the Multilateral Fund supports only developing countries operating under Article 5 of the Montreal Protocol, the GEF assists those countries that do not qualify under Article 5 — either because they are classified as industrialised countries or because their per capita ODS consumption exceeds 300 grams — but which meet major difficulties in complying with the general reduction schedule under Article 2. This includes particularly the CEIT in Eastern Europe.

It is interesting to note that the GEF has long been opposed by developing countries for its close affiliation with the World Bank, and the South refused to accept the GEF as financial mechanism for the conventions on climate change and biological diversity unless GEF voting procedures were restructured following the example of the Multilateral Ozone Fund. During 1992 to 1994, GEF Participants agreed to revise the Facility, as »GEF II«. This relates in particular to the restructuring of voting procedures, which have now been closely modelled on the Montreal Protocol: Decisions by the Council of GEF II are to be taken by a »double weighted majority«, that is, an affirmative vote representing both a 60 percent majority of the total number of Participants — thus favouring the South — and a 60

110 Quoted in: COWIconsult, Study on the Financial Mechanism of the Montreal Protocol (UNEP: Nairobi, 1995), para. 696. Likewise, Sweden, Denmark, France, Austria and some other donor countries intend to increase their bilateral assistance programmes (ibid.).

111 Cf. Andrew Jordan, »Paying the Incremental Costs of Global Environmental Protection. The Evolving Role of GEF«, in: *Environment* 36:6 (1994), pp. 12-36.

112 Cf. Executive Committee, Report of the 5th Meeting, UNEP/OzL.Pro.ExCom/5/16 of 22 November 1991, para. 14. The World Bank also manages an Ozone Projects Trust Fund, which was, together with the Global Environment Trust Fund, the financial basis for the GEF I (now replaced by the GEF Trust Fund). The Bank's Ozone Projects Trust Fund is not to be confused with the Multilateral Fund, whose treasurer is UNEP and which is fully administered by the Executive Committee and its specific voting system. On the Ozone Projects Trust Fund cf. Wood (supra note 25), pp. 343 et seq.

percent majority of the total contributions — which favours the North (cf. *infra*, p. 79). Hence the Head of GEF External Affairs regards the 1994 re-structuring of the GEF as »a change from old style assistance to new style cooperation«.<sup>113</sup>

By the same agreement, the GEF was replenished with two billion US-\$ for 1994-1996. This amount will certainly not suffice to finance all environmental policies addressed by the GEF. Particularly regarding the ozone layer it is questionable whether GEF II can adequately assist Eastern European countries that are not eligible under Article 5 of the Montreal Protocol. Currently, funding of roughly 40 million US-\$ is being provided by the GEF for programmes on ODS phase-out,<sup>114</sup> whereas the total costs of ODS phase-out in all CEIT is estimated to amount to 265-325 million US-\$, which does not yet take into account financial support to convert chemical production facilities.<sup>115</sup>

### *How »environmentally effective« has the Fund worked*

The ultimate measure of success for the Fund's work should be the progressive elimination of ODS in developing countries operating under Article 5. This yardstick is still difficult to assess. Article 7 of the Protocol requires all parties to report the ODS production and consumption data for each year to the Protocol's Secretariat. As regards the year 1993, 123 parties had been required to report: only 69 submitted data, including 39 Article 5 countries. Thus, the data basis is still hardly sufficient. Whereas industrialised countries have virtually eliminated the use of chlorofluorocarbons — with the notable exception of some CEIT —, the developing countries operating under Article 5 have eliminated 15,000 tonnes of annual ODS production and consumption with the help of the Multilateral Fund. Altogether, funding for the phase-out of more than 55,000 ODP tonnes in Article 5 countries has been approved by the Executive Committee. If all these approved projects will be implemented, less than one third of the current ODS consumption (210,000 ODS tonnes) in the developing world will have been eliminated.<sup>116</sup>

<sup>113</sup> Quoted in: 33 ILM 1273 (1994), on p. 1275.

<sup>114</sup> Cf. Report of the Seventh Meeting of the Parties, Vienna, 5-7 December 1995, UNEP/OzL.Pro.7/12 of 27 December 1995, para. 51; cf. also World Bank, *Mainstreaming the Environment. The World Bank Group and the Environment since the Rio Earth Summit, Fiscal Year 1995, Summary* (The World Bank: Washington 1995).

<sup>115</sup> Cf. UNEP Technology and Economic Assessment Panel [TEAP] Ad-Hoc Working Group on CEIT Aspects, *supra* note 72, p. 44.

<sup>116</sup> Cf. Three-Year Rolling Business Plan of the Multilateral Fund 1996-1998, submitted by the Executive Committee to the 13th Meeting of the Open-Ended Working Group of the Parties, UNEP/OzL.Pro/WG.1/13/3 of 16 May 1996.

The use of ODS is still increasing in several developing countries, mainly due to overall growth rates in relevant industrial sectors. According to the most recent country reports on the 1993 consumption and production data,<sup>117</sup> Article 5 parties have increased their consumption of the main CFC by 44 per cent and of other CFC by 180 per cent (compared to respective base year). Reductions occurred in the consumption of halons (by 21 per cent), of carbon tetrachloride (by 1 per cent), of methyl chloroform (by 8 per cent) and of methyl bromide (by 16 per cent).

There has also been a steep increase of the consumption of the substitute HCFC by 86 per cent, which indicates the conversion of CFC use in the respective industrial sectors. It should be noted, however, that the conversion from CFC to HCFC is not the best solution because these substances are still ozone-depleting (with ODP values of about 0.1) and will decompose earlier than CFC — thus, many critics fear that increases in HCFC emissions in the present decade will dangerously increase chlorine levels by 2000, when also the stratospheric CFC concentrations reach their peak levels.<sup>118</sup> Alternatives could be the increased use of non-ODS substances, such as propane or butane.

As regards ODS production data, only Argentina, Brazil, China, India, the Republic of Korea, Mexico, Romania and Venezuela reported data. Those countries increased their production of the main CFCs on average by 87 per cent and of halons by 38 per cent.<sup>119</sup> Production reductions have been reported for carbon tetrachloride (by 140 per cent)<sup>120</sup>, for methyl chloroform (by 93 per cent) and for methyl bromide (by 96 per cent). Following the phase-out strategies supported by the Fund, the production of the highly criticised HCFC increased by 104 per cent. According to the recent adjustments adopted in 1995 (cf. *infra*), these new production facilities in the South will have to be scrapped again at least by 2040, i.e. in the course of normal replacement cycles.

117 Cf. Report of the Secretariat on Information Provided by the Parties in Accordance With Articles 4, 7 and 9 of the Montreal Protocol and the Report of the Implementation Committee, UNEP/OzL.Pro.7/6 of 25 September 1995, Annex I.

118 A similar problem is the conversion to 50% CFC technologies — which is no longer funded by the Executive Committee — and the conversion to hydrofluorocarbons, which are not harmful to the ozone layer but potent greenhouse gases that may eventually fall under the control of the Climate Convention. Of 176 projects undertaken by the World Bank, only one is based on the most environmentally friendly technologies, such as the so-called »greenfreeze« technology initiated by Greenpeace International. Cf. for example the statement of Greenpeace International, Friends of the Earth International and the Indian Centre for Science and Environment at the 12th Meeting of the Executive Committee, in: UNEP/OzL.Pro./ExCom/12/37 of 31 March 1994, para. 111; and in more detail: Steve Kretzmann, Money to Burn. The World Bank, Chemical Companies and Ozone Depletion, Greenpeace Report, September 1994.

119 India and China even increased their CFC production from 1986 to 1994 by 656 resp. 340 per cent. Information by the UNEP Ozone Secretariat, cf. <http://www.unep.no.unep/secretar/ozone/suma5p.htm>.

120 Exceeds 100 per cent due to high feedstock figures for 1993.

Since those consumption and production figures have been reported only for 1993, when the implementing agencies were still in the process of developing the country programmes in the South, the actual reductions will certainly be higher. On the other hand, as reported in December 1995 by the UNEP Executive Director, in several developing countries rapid increases in the use of ODS still occurred.<sup>121</sup> Overall, however, most developing countries are expected — on average — to complete their phase-out programmes for CFC by 2007, for halons by 2008, for carbon tetrachloride by 2009 and for methyl chloroform by 2001;<sup>122</sup> thus, most countries would be ahead of their reduction schedule. Therefore, as it stands now, the work of the Multilateral Fund could be seen as environmentally effective and successful — on the basis of its existing funds. Further implementation of country programmes in Article 5 countries will require a substantial replenishment of the Fund, which is scheduled for the end of 1996.

## 5 INCREMENTAL COSTS THAT HAVE NOT BEEN FUNDED

Did industrialised countries actually pay *all* incremental costs incurred by developing countries? Here is not the space to analyse all 59 country programmes with their more than thousand individual projects in detail.<sup>123</sup> More fruitful appears the argumentation *e contrario*, in the following, therefore, I will look at »border cases«, where the Executive Committee decided *not to approve* individual projects because their costs would not be »incremental« and their reimbursement would exceed the agreement reached in 1990 between industrialised and developing countries.

121 Cf. Report of the Seventh Meeting of the Parties, Vienna, 5-7 December 1995, UNEP/OzL.Pro.7/12 of 27 December 1995, para. 6.

122 This has been calculated by a consortium of consultants from Indian, Malaysia and the USA in 1994, based on various country programmes. The consultants' report has been published as: Open-Ended Working Group of the Parties, Report on the Review under Paragraph 8 of Article 5 of the Montreal Protocol, UNEP/OzL.Pro/WG. 1/11/4 of 19 December 1994 [here: para. 14].

123 See in more detail Annex in to the Report of the 17th Meeting of the Executive Committee, UNEP/OzL.Pro./ExCom/17/60 of 28 My 1995.

The 1990 Meeting of the Parties provided the Executive Committee with an »Indicative List of Categories of Incremental Costs« to be used by the Committee as guideline.<sup>124</sup> The list includes some general principles, most notably the need to choose in each case the most cost-effective and efficient options, to respect the industrial strategy of individual developing countries and to avoid deindustrialisation and the loss of export revenues in the South. Several specific items as eligible »incremental costs« were listed, such as the costs of conversion of existing production facilities and existing equipment and product manufacturing facilities, including capital cost of conversion, establishing new production facilities for substitutes with capacities equivalent to the former facilities, premature retirement or enforced idleness of existing production facilities, loss of export revenues as regards the production of controlled substances, premature modification or replacement of user equipment, patents, designs and the incremental cost of royalties, retraining of workers, import of substitutes, research to adapt new technologies to local circumstances, research and development of alternatives when ODS are used in the production process as intermediate good, collection, recycling, and, if cost-effective, also destruction of ODS already in use, technical assistance to reduce consumption and unintended ODS emission, all other costs as may be authorised by the Executive Committee.

Taken together, the Indicative List of Categories of Incremental Costs comprises a wide range of costs that may arise in the conversion process. Conflicts seldom arose, and only in few cases did the Executive Committee disapprove proposed projects as not containing »incremental costs«. Those decisions were adopted on a random, case-by-case basis: the Committee defined incremental costs only when certain specific — and disputable — projects were proposed, and the resulting decision was then used as precedent for its future work. In many cases, such decisions on policy issues even appear to have been deliberately provoked by the implementing agencies to clarify the eligibility criteria.<sup>125</sup>

124 Cf. Appendix I of Annex IV to Dec. II/8 (»Financial Mechanism«), Report of the Second Meeting of the Parties, UNEP/OzL.Pro.2/3 of 29 June 1990.

125 This is the conclusion by a consultants' study of December 1994. The consultants state that the implementing agencies »have sent forward projects which challenge this ambiguity [of policy issues on incre-

This gradual evolution of the eligibility criteria does not only shed light on the actual implementation of the concept of »all agreed incremental costs« in the ozone regime, but may also be indicative of future financial transfers regarding climate change and biological diversity — in some respect, a model for other environmental issue areas may have been created.

When did the Executive Committee determine certain projects as not being eligible for funding?

*When capacities are expanded*

According to the Indicative List of Categories of Incremental Costs, only those conversion projects should be eligible for funding that *replace* existing capacity. However, some projects were submitted which would have resulted in an *extension* of capacity — those proposals were either rejected or divided in »new« and »old« components. For example, when approving the country programme of the Philippines, the Executive Committee subtracted from the grant amount the costs of new equipment that would have expanded existing capacity, as well as the costs of new laboratory and testing equipment that the enterprises had already used for CFC-11 blown foam.<sup>126</sup> In the case of an Indian company producing fire extinguishers, the Committee refused to fund a new manufacturing facility for the halon-substitute ABC-DCP, unless an equivalent halon production facility was shut down.<sup>127</sup>

Nonetheless, the distinction between existing and expanding capacities is still contested by a number of developing countries, most notably by India, one of the major ODS producers in the South. In March 1994, India introduced a formal proposal in the Executive Committee to change the Indicative List of Categories of Incremental Costs. The Indian argument is that the Protocol allows Article 5 countries to expand their production and consumption of ODS: should developing countries hence decide to expand facilities by using non-ODS technologies, these new capacities — that meet new demand — should also be fully considered as in-

mental costs] to its greatest possible extent; hoping thereby to provoke a definitive resolution to the policy dilemma. This has not represented a constructive contribution to the resolution of policy dilemmas in the operation of the Multilateral Fund. As a practice, it has the effect of exacerbating policy differences among ExCom members and rendering more difficult the problem of reaching the required consensus around policy issues.« Cf. COWIconsult, Study on the Financial Mechanism of the Montreal Protocol (UNEP: Nairobi, 1995), para. 313.

<sup>126</sup> Cf. Executive Committee, Report of the 9th Meeting, UNEP/OzL.Pro./ExCom/9/20 of 12 March 1993 para. 136.

<sup>127</sup> Cf. Executive Committee, Report of the 12th Meeting, UNEP/OzL.Pro./ExCom/12/37 of 31 March 1994, para. 122. The Government of India strongly supported the project with reference to certain precedents which would justify the project.

cremental costs, not least because of the criteria of cost-effectiveness. The Indian submission — though it makes sense under the overall logic of the Protocol — would nevertheless result in immense additional costs for donor countries. Taken to the extreme, the proposed modification of the Fund's policies could amount to the duty of the North to finance in the South full-scale investment programmes on the expansion of non-ODS capacities, since Southern »new demand« for related products such as refrigerators or foams is certainly high. The Executive Committee could not reach a decision by consensus: whereas some Southern representatives agreed with India, representatives from industrialised countries argued that such questions must be decided by the Meeting of the Parties, not by its Executive Committee — a rather weak argument since the Indicative List explicitly grants the *Committee* the power to agree on new categories of incremental costs not contained in the List. Because the 1993 Meeting of the Parties had already approved the Fund's 1994-1996 budget on the basis of the original Indicative List, the North claimed that belated modifications would meet considerable »technical difficulties«. Albeit, owing to the lack of consensus in the Executive Committee, India was requested to revise its paper to clarify any ambiguities concerning recent decisions of the Meeting of the Parties, and to re-submit it.<sup>128</sup> At the next Executive Committee Meeting, the Indian submission — revised and now co-sponsored by Malaysia — was referred to the Open-Ended Working Group and subsequent Meetings of the Parties.<sup>129</sup> By now, India has apparently ceased to call for a re-negotiation of the Indicative List, presumably out of fear that Northern countries would then convert the negotiation process to a general review of the financial mechanism under the Protocol and the concept of incremental costs.<sup>130</sup>

### *When technology will be upgraded*

Occasionally, the conversion from ODS to non-ODS or less-ODS results in technological upgrades. If those upgrades were fully financed by the Fund, the enterprises in developing countries would gain comparative advantages vis-à-vis Northern competitors. One of the first relevant cases that came in front of the Executive

128 Cf. Executive Committee, Report of the 12th Meeting, UNEP/OzL.Pro./ExCom/12/37 of 31 March 1994 para. 179-182.

129 Cf. Executive Committee, Report of the 13th Meeting, UNEP/OzL.Pro./ExCom/13/47 of 27 July 1994, para. 186-189.

130 India requested at the 11th meeting of the Open-Ended Working Group of the Parties that the consideration of the proposed changes »be deferred«. Cf. the Report of the Executive Director to the Seventh Meeting of the Parties, UNEP/OzL.Pro.7/3 of 21 August 1995, para. 35.



Committee was the conversion of AAISA, a Venezuelan manufacturer of automobile air conditioning. Controversial was only one part of the whole project, a new evaporator that was partly a consequence of the plant conversion to non-ODS operation, but partly a technological advance being put in place at the request of the company's customers. The Sub-Committee on Project Review had seen no possibility of splitting the project in two parts and thus recommended to approve the project only in principle, but first to request the World Bank and the Fund Secretariat to determine which proportion of the costs would be eligible as incremental costs. Those findings would then have to be submitted to a subsequent meeting of the Executive Committee. Venezuela demanded instead the non-controversial parts of the project to be approved immediately and to allow the controversial parts to proceed, pending future examinations by World Bank and the Fund Secretariat. Thereby, the Venezuelan representatives quite openly linked the approval of this project with the overall future ODS phase-out policy of Venezuela, in particular the announced national ban on ODS-using automobile air conditioners. Despite those threats of Venezuela, no consensus could be reached, and for the first time the Executive Committee had to reject a proposed project for lack of consensus.<sup>131</sup> At the next meeting, Venezuela submitted a new proposal that had been revised in co-operation with World Bank and the Fund Secretariat and in which the costs of technological advances had been jointly determined and subtracted, to the effect that the net incremental costs of the evaporator line had been reduced by 48 per cent. The project was then approved by the Executive Committee.<sup>132</sup> By the end of 1994, the Executive Committee concluded during a general project review that several more projects had been proposed with components that either the Fund Secretariat or the implementing agencies had considered as technological upgrades not being essential for conversion.<sup>133</sup> Subsequent debates resulted in 1995 in the Committee's decision to formally define »technological upgrades« as

additional advantages which the enterprises may obtain, such as superior quality in their products, increased production capacity or flexibility, reduced energy con-

131 Cf. Executive Committee, Report of the 13th Meeting, UNEP/OzL.Pro./ExCom/13/47 of 27 July 1994, para. 137-147.

132 Cf. Executive Committee, Report of the 14th Meeting, UNEP/OzL.Pro./ExCom/14/15 of 30 September 1994, para. 62-64.

133 Cf. Executive Committee, Report of the 15th Meeting, UNEP/OzL.Pro./ExCom/15/45 of 16 December 1994, para. 125.

sumption and labour and/or other advantages as a result of conversion to non-ODS (or low-ODS) technology.<sup>134</sup>

If such technological upgrades could have been »avoided«, the Fund will not bear the costs associated with the upgrade. However, if the upgrade in question had been unavoidable in the conversion to non-ODS processes, the foil costs are eligible, and the enterprise in the developing country would enjoy a »free lunch«.

*When conversion projects result in savings and benefits*

Conversion from ODS to non-ODS or less-ODS frequently results in changes of future operational costs. When future operational costs *exceed existing costs*, the Fund will compensate these recurrent incremental costs for a transitional period defined in the respective project documentation.<sup>135</sup> However, whereas initially transitional periods of up to four years had been accepted, this period has been considerably shortened due to recent financial difficulties of the Fund. Incremental operational costs are now covered in most cases merely for one year or even less., *Loss of future profits* are regularly not considered as eligible incremental operating cost,<sup>136</sup> with the exception of the shut-down of ODS producing facilities — here, both lost profit and the retraining of displaced workers are currently debated by the Committee with a view of their future treatment.<sup>137</sup>

When *savings or other benefits* in the converted operations occur, they are considered in the determination of the grant amount, i.e. subtracted from the total cost of conversion. When future savings and benefits are uncertain, estimates have to be made conservatively.<sup>138</sup> Typical examples are the conversion of propellants, where most aerosol producers in Article 5 countries opted for deodorised hydrocarbons such as propane, butane or iso-pentane. Because the (US-based) cost of hydrocarbon is only 0.6 US-\$/kilogram compared to 3.3 US-\$/kilogram of CFC,

<sup>134</sup> Cf. Executive Committee, Report of the 18th Meeting, UNEP/OzL.Pro./ExCom/18/75 of 24 November 1995, para. 56-57. Cf. on the debates also Executive Committee, Report of the 16th Meeting, UNEP/OzL.Pro./ExCom/16/20 of 17 March 1995, para. 74-76.

<sup>135</sup> Cf. Executive Committee, Report of the 10th Meeting, UNEP/OzL.Pro./ExCom/10/40 of 1 July 1993, para. 171 (b).

<sup>136</sup> Cf. Executive Committee, Report of the 13th Meeting, UNEP/OzL.Pro./ExCom/13/47 of 27 July 1994, para. 75.

<sup>137</sup> Expert Group on the Production of Substitutes for Ozone-Depleting Substances, Report of the 1st Meeting as contained in Annex VI of the Report of the Executive Committee's 18th Meeting, UNEP/OzL.Pro./ExCom/18/75 of 24 November 1995, Recommendation No 7.

<sup>138</sup> Cf. Executive Committee, Report of the 10th Meeting, UNEP/OzL.Pro./ExCom/10/40 of 1 July 1993, para. 171 (c). Regarding estimates on future operation costs, the Executive Committee decided in 1994 not to use *growth projections* in determining future operational costs and benefits, neither positive nor negative. Cf. Executive Committee, Report of the 12th Meeting, UNEP/OzL.Pro./ExCom/12/37 of 31 March 1994, para. 62.

the Committee takes the resulting savings from propellants' conversion into account when determining the incremental costs of conversion projects.<sup>139</sup> Similar cases are the conversion of extruded polystyrene and polyolefin foam from CFC-12 to cheaper substitutes such as butane or pentane (though costly investments in fire safety regulations are also necessary),<sup>140</sup> the replacement of CFC chillers with non-ODS technologies, where energy savings are regularly subtracted from the incremental costs of replacement,<sup>141</sup> or the conversion of fire extinguishers.<sup>142</sup>

In some cases, conversion to non-ODS technologies will result, in the long run, in *net savings*, i.e. in additional *profits* for enterprises in Article 5 countries. Such additional profits for enterprises in the South have certainly not been intended by the 1990 Meeting of the Parties. On the other hand, the conversion to non-ODS technology will — even in cases with likely net savings — require substantial investments, and capital is scarce in most developing countries. To resolve this conflict between rapid ODS phase-out in the South and the restriction of funding policies to incremental *costs*, the Executive Committee repeatedly debated on the adequate treatment of projects with future net incremental savings, and determined in July 1994 that

whereas only incremental costs should be financed with *grants*,

projects with net savings may be funded through *concessional loans* either by the Fund or by other sources, and

all implementing agencies, regional development banks and other lending institutions should be encouraged — and assisted by the transfer of project documentation etc. — to provide loans for those projects in Article 5 countries that lead to ODS phase-out, but are not eligible for grants from the Fund.<sup>143</sup>

139 Cf. Executive Committee, Report of the 10th Meeting, UNEP/OzL.Pro./ExCom/10/40 of 1 July 1993, Annex H, para. 37-39.

140 Cf. Executive Committee, Report of the 10th Meeting, UNEP/OzL.Pro./ExCom/10/40 of 1 July 1993, Annex H, para. 62-65.

141 Cf. Executive Committee, Report of the 12th Meeting, UNEP/OzL.Pro./ExCom/12/37 of 31 March 1994 para. 160(iv).

142 A World Bank project on the conversion of fire extinguishers in China was deferred in 1994 by the Executive Committee until the operating savings are calculated when determining the grant amount. Cf. Executive Committee, Report of the 13th Meeting, UNEP/OzL.Pro./ExCom/13/47 of 27 July 1994, para. 75.

143 Cf. Executive Committee, Report of the 12th Meeting, UNEP/OzL.Pro./ExCom/12/37 of 31 March 1994, para. 145-154; Executive Committee, Report of the 13th Meeting, UNEP/OzL.Pro./ExComA3/47 of 27 July 1994, para. 172-176.

*When certain ozone-depleting substances are not covered by Article 5 country obligations*

In 1992, a number of ODS had been inserted into the Montreal Protocol by the Copenhagen Amendment, obliging industrialised countries to phase out HCFC by 2030, HBFC by 1996 and to freeze methyl bromide emissions at 1991 levels. As regards these substances, Article 5 countries did not assume any reduction targets.<sup>144</sup> Accordingly, in 1993 the Executive Committee rejected projects addressing methyl bromide, such as a data survey project in China proposed by UNDP which the Committee considered both as contrary to the terms of the Protocol and as being less urgent than CFC reduction projects in the South.<sup>145</sup> Likewise, the conversion of HCFC plants was not accepted as eligible for funding.<sup>146</sup>

In 1995, developing countries formally accepted to freeze methyl bromide consumption by 2002 and to phase out HCFC consumption by 2040 (cf. *infra*). Thus, projects addressing methyl bromide might now be approved by the Executive Committee. As regards the »transitional substances« HCFC, the Executive Committee now requires all implementing agencies and Southern enterprises to fully explain their reasons if they opted in a specific case for HCFC and not for non-ODS alternatives. In any case, enterprises in the South are not allowed to seek additional money from the Fund for the subsequent »second« conversion to non-HCFC substances which they must have completed by 2040.<sup>147</sup>

*When enterprises are owned by and/or export to industrialised countries*

Several enterprises in developing countries are highly integrated into the world market, either because they export large proportions of their production or because they are fully or partially owned by foreign companies. In such cases, the reimbursement of the full incremental costs could result in significant comparative advantages for some companies without being necessarily justified by the principles

144 Cf. Montreal Protocol as amended in 1992, Article 2 F to H, Article 5, para. 1 bis.

145 Cf. Executive Committee, Report of the 9th Meeting, UNEP/OzL.Pro./ExCom/9/20 of 12 March 1993, para. 68-73; Executive Committee, Report of the 10th Meeting, UNEP/OzL.Pro./ExCom/10/40 of 1 July 1993, para. 142. The policy of the Executive Committee apparently changed in 1994, when it approved a grant of 87,000 US-\$ to the UMDP work programme on the survey of production and consumption of methyl bromide in China. Cf. Executive Committee, Report of the 12th Meeting, UNEP/OzL.Pro./ExCom/12/37 of 31 March 1994, para. 58.

146 Cf. Executive Committee, Report of the 17th Meeting, UNEP/OzL.Pro./ExCom/17/60 of 28 July 1995 para. 26.

147 Cf. Executive Committee, Report of the 19th Meeting, UNEP/OzL.Pro./ExCom/19/64 of 10 May 1996, para. 17.

that underlie Articles 5 and 10 of the Protocol: international fairness and equity and the fulfilment of the basic domestic needs of developing countries. In order to prevent unjustified market distortion without excessively restricting the concept of foil incremental costs, the Southern and Northern representatives in the Executive Committee agreed on a mutually acceptable demarcation:

Enterprises in Article 5 countries that are wholly owned subsidiaries of transnational corporations or are permitted to operate in »free zones« and whose output is for export only, are not eligible for funding. When enterprises are only partly owned by transnational corporations, the Executive Committee follows a case-by-case approach to the effect that only the costs incurred by local ownership will be compensated as incremental costs.<sup>148</sup> The same applies *mutatis mutandis* to enterprises in Article 5 countries which are wholly or partly owned by those few countries that are not parties to the Protocol,<sup>149</sup> and to changes of ownership during project implementation.<sup>150</sup>

Several enterprises in Article 5 countries are locally owned, but export their products predominantly to industrialised countries. If those enterprises would be supported in their ODS phase-out by the Multilateral Fund, the grant would be equivalent to an export subsidy and thus result in (additional) market distortions. Such a case came first before the Executive Committee in 1994, when the World Bank proposed to fund the conversion of refrigerator compressors produced by the export-oriented Brazilian company EMBRACO. The Sub-Committee on Project Review recommended to defer the approval of the project pending the decision of the policy issues involved. There were both legal and political arguments. Legally, the »loss of export revenues« was included in the Indicative List of Categories of Incremental Costs only as regards *direct ODS production*, not as regards the use of *ODS as intermediate good*, which was the case at EMBRACO.<sup>151</sup> The political argument was that a grant to EMBRACO for the conversion of compressors production would be tantamount in fact to an export subsidy for the total production of

148 Cf. Executive Committee, Report of the 7th Meeting, UNEP/OzL.Pro.ExCom/7/30 of 27 June 1992, para. 86-88; the Secretariat's report on pro and contra arguments is reprinted as Annex VI to this Report. The main argument in the Secretariat's report is that the economic incremental costs are costs to a country as a whole, not to other economic agents such as transnational corporations. The grant amount should be determined on the basis of the society's welfare in developing countries, without taking into account eventual incremental costs for transnational corporations.

149 Cf. Executive Committee, Report of the 7th Meeting, UNEP/OzL.Pro.ExCom/7/30 of 27 June 1992, para. 89-91. Cf. also the Secretariat's legal and political analysis, reprinted as Annex VE to this report.

150 Cf. Executive Committee, Report of the 19th Meeting, UNEP/OzL.Pro./ExCom/19/64 of 10 May 1996, para. 68 et seq.

151 Executive Committee, Report of the 13th Meeting, UNEP/OzL.Pro./ExCom/13/47 of 27 July 1994, para. 76-85.

the company: EMBRACO could produce at a lesser price than Northern competitors and thus gain an additional market share that — it could be argued — »belonged« to the competitors.

Both arguments were contested by Southern representatives at the Executive Committee. The legal distinction between direct ODS production and the use of ODS as intermediate good was rejected because such distinction had not been intended by the delegates at the 1990 London Conference, when they adopted the Indicative List. Southern representatives argued that the issue involved only small amounts of money, but would be of overwhelming importance because it was the first project submitted by Brazilian authorities. Thus, the confidence of the Brazilian industry and political leaders in the capacity of the Fund to finance their conversion projects was at stake. This was especially true because EMBRACO had already completed the conversion and requested *retroactive* payment by the Fund — should this be deferred, EMBRACO would be »punished« for being environmentally progressive, and other Brazilian — and Indian, Chinese etc. — companies might think twice before converting their production during the grace period. Also, in view of Article 5 nations, commercial considerations, such as reflections on market shares etc., were not part of the business of the Executive Committee: the Committee should finance any project that reduces ODS in Article 5 countries without second thoughts.

Eventually, both sides agreed on a compromise formula, differentiating between Southern exports to industrialised countries on the one side and South-South trade and production for internal markets on the other. EMBRACO received a grant which represented 79 per cent of the requested funding and reflected the share of the company's production utilised in Article 5 countries (including Brazil).<sup>152</sup>

In the following, the Executive Committee developed, in a small working group at its December 1994 Meeting, firm guidelines for future projects similar to the EMBRACO case:

If enterprises in Article 5 countries export less than 10 per cent of their total production to non-Article 5 countries, the Fund will bear all costs of conversion, if those exports amount to something between 10 and 70 per cent of total exports, the amount paid by the Fund shall be reduced accordingly, and

<sup>152</sup> Ibid., para. 85.

- if those exports to industrialised countries exceed 70 per cent of the total production, the conversion efforts of Southern companies will not be accepted as incremental costs but should be financed by the enterprise itself.<sup>153</sup>

Exempted from this ruling were agricultural and fish exports — i.e. typical Southern export goods: here, *all* conversion projects will be compensated as incremental costs, independently from their export orientation.

#### *When domestic revenues or subsidies are lost*

The conversion of existing products or production processes will in most cases be associated by various forms of domestic taxation, imported goods — such as CFC substitutes or new equipment — may be subject to customs duties, the installation of new equipment may underlie domestic taxation. The Executive Committee determined by consensus that *those financial costs* of enterprises in Article 5 countries will not be borne by the Multilateral Fund, because this would effect a grant to the respective country exceeding the country's actual incremental costs. The same applies to the loss of economic subsidies — such as on CFC use — or to rates of return in excess of the cost of capital which might incorporate non-economic financial effects such as administered prices or interest rates.<sup>154</sup> Similarly, the Executive Committee rejected a proposal by Venezuela that had called for the acceptance of tax incentives for ODS phase-out as eligible incremental costs.<sup>155</sup>

#### *When plants have been recently established*

Several developing countries, most notably India, considerably extended their ODS production and consumption after accession to the Montreal Protocol. This was not contradictory to the wording of the Protocol, which permitted developing countries to expand production up to the ceiling of 300 grams per capita. On the other hand, excessive production increases, particularly when accompanied by aggressive export marketing, could be considered as violation of the »spirit« of the treaty and the principle of co-operation in order to protect the ozone layer. Since the Indian policy was even resented by several developing countries, the Executive

<sup>153</sup> The average over the three years prior to submission of the project shall be used to determine production and exports to non-Article 5 countries. Cf. Executive Committee, Report of the 15th Meeting, UNEP/OzL.Pro./ExCom/15/45 of 16 December 1994, para. 142-147.

<sup>154</sup> Cf. Executive Committee, Report of the 10th Meeting, UNEP/OzL.Pro./ExCom/10/40 of 1 July 1993, para. 171 (a).

<sup>155</sup> Cf. Executive Committee, Report of the 16th Meeting, UNEP/OzL.Pro./ExCom/16/20 of 17 March 1995, para. 89.

Committee could agree by consensus that the future conversion of plants with ODS-capacity installed *after 25 July 1995* will not be eligible for funding as »incremental costs«. <sup>156</sup> Consequently, industrialised countries will still have to fully compensate the future conversion of all CFC plants in Article 5 countries erected from 1990 to 1994 — this again may indicate the considerable bargaining power of the developing world in the issue area of ozone politics.

In 1994, the Executive Committee also stopped — in principle — the conversion to 50 per cent reduced CFC technology, which first had been accepted for the transition process. <sup>157</sup>

*When institutional strengthening or research is not essential for the phase-out of ozone-depleting substances*

Because most developing countries had difficulties in effectively implementing national programmes on ODS phase-out, the Executive Committee approved various projects on »institutional strengthening« in Article 5 countries, although this had not been included by the parties in the Indicative List of Categories of Incremental Costs. <sup>158</sup> Typical examples of institutional strengthening are the establishment of national focal points on ozone policy <sup>159</sup> or the support of co-ordination between different domestic agencies, the Executive Committee and the implementing agencies, which also regularly includes office equipment and specialised training. Although the general necessity of measures on institutional strengthening in (some) Article 5 countries has apparently not been questioned in the Executive Committee, some representatives of industrialised countries expressed concern over the

<sup>156</sup> Cf. Executive Committee, Report of the 17th Meeting, UNEP/OzL.Pro./ExCom/17/60 of 28 July 1995 para. 15.

<sup>157</sup> The Committee called upon the implementing agencies and Article 5 countries to avoid in the future the use of 50 per cent reduced technology, and a Brazilian company received a grant of 162,000 US-\$ for the conversion to reduced CFC only under the condition not to seek any additional funding for later complete ODS phase-out. Cf. Executive Committee, Report of the 15th Meeting, UNEP/OzL.Pro./ExCom/15/45 of 16 December 1994, para. 84.

<sup>158</sup> Cf. in general Executive Committee, Report of the 5th Meeting, UNEP/OzL.Pro./ExCom/5/16 of 22 November 1991, para. 28 lit d. Detailed recommendations by the Executive Committee are contained in: Executive Committee, Report of the 7th Meeting, UNEP/OzL.Pro./ExCom/7/30 of 27 June 1992, para. 69-75. According to those recommendations, projects on institutional strengthening shall be decided on a case-by-case basis, taking into account the peculiar circumstances influencing ODS phase-out in the respective country.

<sup>159</sup> By 1994, the Fund had financed 42 National Ozone Units — typically staffed with 1 to 3 full time professionals — that were to work with industry associations, NGOs, ODS users and suppliers, academic experts, and individual ODS users. Cf. 1994 Report of the Economics Options Committee, 1995 Assessment (November 1994), p. 2-12.



cost-effectiveness of these expenditures and their direct relevance to the ODS phase-out in developing countries.<sup>160</sup>

One disputed issue was, e.g., the training of customs officers. In the case of Cameroon, the Committee approved the amount of 20,200 US-\$ for the training of customs officers by UNEP.<sup>161</sup> A joint project was also approved for Togo and Congo<sup>162</sup> and Gambia<sup>163</sup>, whereas in the cases of Cote d'Ivoire,<sup>164</sup> India<sup>165</sup> and the Central African Republic<sup>166</sup> the funding of projects in training of customs officers was rejected.

Similarly, Chile was compensated for the costs of a national programme on »public awareness«, although this component of the Chilean country programmes had been initially questioned by representatives of industrialised countries. However, the public awareness programme was eventually accepted as »an incremental cost in the broad sense«.<sup>167</sup> By contrast, some research programmes in developing countries had not been accepted as incremental costs, such as the installation of low-latitude atmospheric ozone monitoring stations or the research on the viability of HFC-134a as a refrigerant for compressors, both submitted by Brazil.<sup>168</sup> Nonetheless, the Fund is — in principle — prepared to finance the indigenous development of technology in developing countries, although in fact no such projects have been approved yet.<sup>169</sup>

160 Cf., e.g. COWIcomult, Study on the Financial Mechanism of the Montreal Protocol (UNEP: Nairobi, 1995V para. 139).

161 Cf. Executive Committee, Report of the 10th Meeting, UNEP/OzL.Pro./ExCom/10/40 of 1 July 1993, para. 89.

162 Cf. Executive Committee, Report of the 17th Meeting, UNEP/OzL.Pro./ExCom/17/60 of 28 July 1995, para. 56lite.

163 Cf. Executive Committee, Report of the 19th Meeting, UNEP/OzL.Pro./ExCom/19/64 of 10 May 1996, para. 49 (c).

164 The Executive Committee also disapproved the funding of projects on the »awareness and information of those working in refrigeration«. Cf. Executive Committee, Report of the 12th Meeting, UNEP/OzL.Pro./ExCom/12/37 of 31 March 1994, para. 100.

165 Cf. Executive Committee, Report of the 12th Meeting, UNEP/OzL.Pro./ExCom/12/37 of 31 March 1994, para. 118.

166 Cf. Executive Committee, Report of the 18th Meeting, UNEP/OzL.Pro./ExCom/18/75 of 24 November 1995, para. 40 (d).

167 Cf. Executive Committee, Report of the 7th Meeting, UNEP/OzL.Pro./ExCom/7/30 of 27 June 1992, para. 38-46.

168 Cf. Executive Committee, Report of the 7th Meeting, UNEP/OzL.Pro./ExCom/7/30 of 27 June 1992, para. 56.

169 Cf. for example the recommendation by the Executive Committee at its 8th Meeting that »[t]he Executive Committee, as mandated by the Parties, could consider proposals regarding research and development on substitutes, and equipment production facilities for recycling and destruction on a case-by-case basis provided that the costs incurred were of an incremental nature«. Cf. Executive Committee, Report of the 8th Meeting, UNEP/OzL.Pro./ExCom/8/29/Corr. 1 of 12 November 1992, para. 104-198, here: para. 108 (2).

*When projects are not »cost-effective«*

Industrialised countries insisted that all conversion projects financed by the Fund shall be as far as possible »cost-effective«. Although the criterion of cost-effectiveness was already contained in the »Indicative List of Categories of Incremental Costs« adopted by the 1990 Meeting of the Parties, the cost-effectiveness has become even more important since 1995, when the surge of project proposals from developing countries exceeded the funds available.<sup>170</sup> The criterion of cost-effectiveness does not imply that ineffective projects will not be reimbursed — the present »prioritization« of projects and the refusal of comparatively »ineffective« projects is only to guarantee that the existing funds will be used first for all those conversion projects where a given dollar can yield the highest rate of ODS phase-out.<sup>171</sup> As regards the situation of certain small developing countries, where ODS consumption is very low and where national conversion programmes rarely meet criteria of cost-effectiveness, the Executive Committee reserved 6.6 million US-\$ for »low-ODS-consuming countries«, defined as having a total annual consumption level of less than 360 tonnes ODS. This amount will be in addition to any funds which those countries received for projects that in fact qualified under the cost-effectiveness thresholds.<sup>172</sup> On the other hand, the general threshold values have not been modified for low-ODS-consuming countries, although this had been suggested by some Southern representatives.<sup>173</sup>

170 Cf. on different criteria of cost-effectiveness for different industrial sectors — ranging from 1.48 US-\$/kg ODP (Halon) to 38.50 US-\$/kg OOP (certain solvents) — Executive Committee, Report of the 16th Meeting, UNEP/OzL.Pro./ExCom/16/20 of 17 March 1995, para. 32.

171 Cf. Executive Committee, Report of the 16th Meeting, UNEP/OzL.Pro./ExCom/16/20 of 17 March 1995, para. 17 et seq.; and »Actions to Improve the Financial Mechanism for the Implementation of the Montreal Protocol«, Annex V to the Report of the Seventh Meeting of the Parties, Vienna, 5-7 December 1995, UNEP/OzL.Pro.7/12 of 27 December 1995.

172 Cf. Executive Committee, Report of the 16th Meeting, UNEP/OzL.Pro./ExCom/16/20 of 17 March 1995, para. 32 (g) (hi); Executive Committee, Report of the 17th Meeting, UNEP/OzL.Pro./ExCom/17/60 of 28 July 1995, para. 19; cf. also on low-volume-ODS-consuming countries and very low-volume-ODS-consuming countries Dec. VII/25 of the Seventh Meeting of the Parties, providing for special assistance; cf. Report of the Seventh Meeting of the Parties, Vienna, 5-7 December 1995, UNEP/OzL.Pro.7/12 of 27 December 1995, para. 94.

173 Cf. Executive Committee, Report of the 16th Meeting, UNEP/OzL.Pro./ExCom/16/20 of 17 March 1995, para. 29-30.

## 6 RECENT CONFLICTS AND PROGRESS. VIENNA 1995

In 1995, the more than 150 parties to the Vienna Convention could celebrate the tenth anniversary of their treaty on the protection of the ozone layer, and they celebrated this event again in Vienna, where first negotiations had been held in 1985. Though — the Earth' ozone shield is not yet out of danger: delegates had to note several old and new threats, including »small pockets of political backlash [that] had begun attacking the protection effort, including the scientific consensus on ozone depletion.«<sup>174</sup> Moreover, due to past excessive use of CFCs that are presently reaching the stratosphere, peak ozone losses still lay head: Around the year 2000, winter ozone losses over Europe will amount to 12-13 per cent and ultraviolet radiation will be up by about 11 per cent — if no unwelcome »surprises« such as volcanic eruptions occur, further deteriorating the ozone layer.<sup>175</sup>

In the following, I will emphasise three major recent conflicts on ozone layer protection: the debate on the future duties of developing countries, their concern about technological dependence, and finally — and briefly — the issue of Russian non-compliance.

### *The conflict on new reduction obligations for developing countries*

At the 1995 Vienna Meeting of the Parties, delegates had to review the position of developing countries (i) as regards the substances that had been included in the Protocol by the 1992 Amendment (binding only industrialised countries) and (ii) the possibility of accelerating the existing phase-out obligations for Article 5 countries.<sup>176</sup> With no surprise, the funding of further reduction efforts in developing countries became the main issue of contention.

<sup>174</sup> So the UNEP Executive Director at the Vienna Meeting, cf. the Report of the Seventh Meeting of the Parties, Vienna, 5-7 December 1995, UNEP/OzL.Pro.7/12 of 27 December 1995, para. 6.

<sup>175</sup> There are virtually no options for further protection efforts to change the magnitude or timing of this peak chlorine loading around the year 2000. There are, however, several options for hastening the fall-off after peak-loading, including the acceleration of phase-out schedules for developing countries, as discussed below. Cf. Report of the Seventh Meeting of the Parties, Vienna, 5-7 December 1995, UNEP/OzL.Pro.7/12 of 27 December 1995, para. 20-21.

<sup>176</sup> Cf. Montreal Protocol as amended in 1990, Article 5 (8): »A Meeting of Parties shall review, not later than 1995, the situation of the Parties operating under paragraph 1 of [Article 5], including the effective implementation of financial co-operation and transfer of technology to them, and adopt such revisions that may be deemed necessary

Southern representatives made clear that »the partnership at the heart of the ozone regime was based on a balanced and equitable sharing of efforts and commitments between developed and developing countries [and that] a replenishment of the Fund with additional resources should be a central element of the debate«.<sup>177</sup>

Likewise, the Executive Committee recommended the Meeting of the Parties to consider that »as a consequence of active and welcome action within Article 5 countries, there had been a substantial increase in project development and presentation and, therefore, in funding requests«, that the level of contributions agreed for the 1994-1996 period was not expected to enable approval in 1995 »of a significant proportion of projects that had already been identified by implementing agencies and Article 5 countries« and that »the current difference between available funds and anticipated project requests could mean that the phase-out efforts of Article 5 countries would be slower than otherwise possible«.<sup>178</sup> The industrialised countries agreed in fact to replenish the Fund by 1996,<sup>179</sup> but did not pledge any specific amount of new funds — which had been demanded by developing countries with an impressive unity in their negotiation strategy.<sup>180</sup>

Due to this North-South deadlock, parties could not agree upon an acceleration for the reduction schedules that were already in place for developing countries, and the ten-year »grace-period« was not shortened.<sup>181</sup> As it stands now, developing

regarding the schedule of control measures applicable to those Parties.« Cf. also Montreal Protocol as amended in 1992, Article 5 (1) and (1 bis).

177 Cf. Report of the Seventh Meeting of the Parties, Vienna, 5-7 December 1995, UNEP/OzL.Pro.7/12 of 27 December 1995, para. 71.

178 Cf. Executive Committee, Report of the 16th Meeting, UNEP/OzL.Pro./ExCom/16/20 of 17 March 1995, para. 32 lit h. Cf. also the Report of the Sixth Meeting of the Parties, Nairobi, 6-7 October 1994, UNEP/OzL.Pro.6/7 of 10 October 1994, para. 48 et seq.

179 Cf. Dec. VII/4 of the 1995 Meeting of the Parties: »[...] (2) To stress that the adoption of any new control measures by the Seventh Meeting of the Parties for Parties operating under paragraph 1 of Article 5 will require additional funding which will need to be reflected in the replenishment of the Multilateral Fund in 1996 and beyond and in the implementation of technology transfer,

(3) To underline that the implementation of control measures by Parties operating under paragraph 1 of Article 5 will, as provided in Article 5, paragraph 5, depend upon the effective implementation of the financial cooperation as provided by Article 10 and the transfer of technology as provided by Article 10 A;

(4) To urge Parties when taking decisions on the replenishment of the Multilateral Fund in 1996 and beyond, to allocate the necessary funds in order to ensure that countries operating under paragraph 1 of Article 5 can comply with their agreed control measures.« Cf. Report of the Seventh Meeting of the Parties, Vienna, 5-7 December 1995, UNEP/OzL.Pro.7/12 of 27 December 1995, para. 94.

In an interpretative declaration, France made clear that only measures resulting in »agreed incremental costs« would benefit from the provisions of paragraph 2 above. Cf. Report of the Seventh Meeting of the Parties, Vienna, 5-7 December 1995, UNEP/OzL.Pro.7/12 of 27 December 1995, para. 98.

180 Cf. Owen Greene (supra note 14).

181 Furthermore, developing countries were granted the right to export CFC to other Article 5 countries — despite the restriction of »basic domestic needs« — up to the total production limits required by the Protocol. Cf. Dec. VII/9 of the Seventh Meeting of the Parties, para. 1-2; UNEP/OzL.Pro.7/12 of 27 December 1995.

countries have only to freeze CFC use by 1999 and to phase out those substances not before 2010.<sup>182</sup> The issue of funding also prevented developing countries from accepting strict reduction schedules for those substances that (only) industrialised countries had to control following the 1992 Amendment — i.e. methyl bromide and the CFC substitutes HCFC.<sup>183</sup> Again, the developing countries linked their acceptance of new obligations with additional resources for the Multilateral Fund.<sup>184</sup>

For methyl bromide, Article 5 nations now must only freeze their consumption by 2002 at average 1995-1998 levels.<sup>185</sup> In monetary terms, this is the »cheapest« possible solution — the least stringent scenario discussed by the assessment panels was a freeze by 1998 at 1993-1995 levels, which was expected to cost 7.2 to 59.7 million US-\$ [discount rate=3.0%]. The most stringent possible regulation discussed by the panels — a 25 per cent reduction by 2005 followed by a phase-out by 2011 — would have resulted in total costs of 58.4 million up to 222.7 million or — without discounting — up to 326.7 million US-\$.<sup>186</sup> This was apparently more than industrialised countries were willing to pay. Methyl bromide is an important pesticide used in the farming sector in several developing countries — thus, some Southern representatives expressed their concern at the 1995 Conference that in their countries, a phase-out of methyl bromide would threaten socio-political and economic stability, »and survival itself«.<sup>187</sup> However, many technical options for methyl bromide conversion exist, and, depending on funding, a future phase-out of methyl bromide in the South is technically feasible (probably with minor exceptions).

Again, the »cheapest« solution was negotiated for the »transitional substances« HCFC. Article 5 countries now must freeze their consumption by 2016 at 2015

182 Article 5 para. 8 bis (a) of the Montreal Protocol as adjusted in 1995, cf. Annex I to the Report of the Seventh Meeting of the Parties, Vienna, 5-7 December 1995, UNEP/OzL.Pro.7/12 of 27 December 1995. The same — i.e. the »London plus 10 years« schedule — applies mutatis mutandis to all substances controlled since 1987 and 1990.

At least the installation of CFC production facilities after 7 December 1995 has now formally been proscribed. *Ibid.*, para. 7.

183 Cf. Montreal Protocol as amended in 1992, Article 5 (1 bis).

184 Cf. e.g., the Draft Report of the Preparatory Meeting for the Seventh Meeting of the Parties to the Montreal Protocol, UNEP/OzL.Pro.7/Prep/L.1 of 30 November 1995, para. 32 et seq.; and its Addendum of 6 December 1995, para. 9 et seq.

185 Article 5 para. 8 ter (d) of the Montreal Protocol as adjusted in 1995, cf. Annex in to the Report of the Seventh Meeting of the Parties, Vienna, 5-7 December 1995, UNEP/OzL.Pro.7/12 of 27 December 1995.

186 Earlier phase-out dates in developing countries were considered as being technically unfeasible. Cf. TEAP, Report to the Parties, November 1995, 1-36.

187 Cf. Report of the Seventh Meeting of the Parties, Vienna, 5-7 December 1995, UNEP/OzL.Pro.7/12 of 27 December 1995, para. 65.

levels, and to phase out those substances by the year 2040.<sup>188</sup> This was expected to cost only 40-75 million US-\$ [discount factor=3%], whereas more stringent options would have amounted to incremental costs of up to 420-500 million US-\$.<sup>189</sup>

Following the adjustments adopted at the 1995 Vienna Conference, the ozone layer will take longer to recover than would have been technically feasible at a relatively low cost. The scientific assessment panels<sup>190</sup> under the Protocol had calculated that if methyl bromide emissions were eliminated already by the year 2001, there would be a 13 per cent less ozone loss over the next 50 years; if HCFC would be eliminated already by the year 2004, there would be 5 per cent less ozone loss; but if there were any extended significant increase in HCFC and methyl bromide under the exempted status, this would, in the long run, »negate earlier results«.<sup>191</sup>

Even if the 1992 Copenhagen schedule would be implemented worldwide — this is not yet certain —, there will be, *inter alia*, a sharp increase in non-melanoma skin cancer, which will peak around the year 2040 and return to zero only in 2100. The 1995 Vienna Conference did not succeed in modifying this trend — for lack of roughly one billion US-\$.<sup>192</sup> The decisions adopted in Vienna will now again be reviewed in 1997. The Executive Committee has been requested to prepare a three-year rolling plan that should be presented to the 1996 Meeting of the Parties.<sup>193</sup> Should the North agree to substantial increases in the funding levels, further ODS reduction efforts may be feasible.

### *The issue of »technological dependence«*

The more companies around the world embarked on total ODS phase-out, the more important became the control of new technologies. The Montreal Protocol as

188 Article 5 para. 8 ter (a)-(c) of the Montreal Protocol as adjusted in 1995, cf. Annex III to the Report of the Seventh Meeting of the Parties, Vienna, 5-7 December 1995, UNEP/OzL.Pro.7/12 of 27 December 1995.

189 to fact, the costs were even less, because not even the least stringent option discussed by the TEAP (freeze by 2011) has been adopted. Cf. TEAP, Report to the Parties, November 1995, II-28 et seq.

190 Cf. NOAA/NASA/UNEP/WMO, Scientific Assessment of Ozone Depletion: 1994, Executive Summary, February 1995, p. 16 et seq.

191 Cf. Report of the Seventh Meeting of the Parties, Vienna, 5-7 December 1995, UNEP/OzL.Pro.7/12 of 27 December 1995, para. 21.

192 This does not take into account, however, the costs in industrialised countries, because this group was also not willing to adopt the most stringent regulations proposed by the scientific panels. Industrialised countries will have to phase out methyl bromide by 2010 and HCFC — albeit after gradual reductions — by 2030. Cf. Article 2F and 2H of the Montreal Protocol as adjusted in 1995, in Annex III to the Report of the Seventh Meeting of the Parties, Vienna, 5-7 December 1995, UNEP/OzL.Pro.7/12 of 27 December 1995.

193 Cf. for a first draft the Three-Year Rolling Business Plan of the Multilateral Fund 1996-1998, submitted by the Executive Committee to the 13th Meeting of the Open-Ended Working Group of the Parties, UNEP/OzL.Pro/WG. 1/13/3 of 16 May 1996. No proposals for the replenishment have been made.

amended in 1990 requires industrialised countries to expeditiously transfer non-ODS or less-ODS technology under fair and most favourable conditions to all developing countries operating under Article 5. This task is to be fulfilled by the implementing agencies and the Multilateral Fund, which may reimburse licenses, patent rights and royalties as »incremental costs« of Article 5 countries. However, an interim progress report submitted in 1995 by the Fund Secretariat met considerable concern by Southern representatives: they requested the Secretariat to revise its report, now taking into account, *inter alia*, the comparison between the prices Article 5 countries actually pay and the money provided by the Fund,<sup>194</sup> the possible negative impact of the transitory nature of some non-ODS technologies, the fear of technological dependency, and the issue of the possible growing reluctance on the part of some technology providers to participate in conversion rather than construction of — and joint ventures in — new facilities, which could be seen as increasing Southern dependence.<sup>195</sup> Southern representatives also fear that international efforts to transfer ozone-benign technologies to developing countries were increasingly undermined by the »dumping« of used and redundant equipment using or containing ODS in the South.<sup>196</sup>

The latter issue lies certainly outside the capacities and the mandate of the Multilateral Fund, but is presently being debated by the parties. As regards technological independence, the Fund appears prepared to support the development of indigenous technologies by Article 5 countries, unless the costs of local development do not exceed the cost of transferring equivalent technology.<sup>197</sup> However, no such projects have been approved yet.<sup>198</sup> This finding might at least partly be ex-

194 The behaviour of ODS prices appears to differ among developing countries: in some cases — in ODS producing countries and in Asia — prices have been relatively steady, whereas in Africa and Latin America prices have risen appreciably. When prices increased, ODS phase-out moved considerably faster. Cf. Open-Ended Working Group of the Parties, Report on the Review under Paragraph 8 of Article 5 of the Montreal Protocol, UNEP/OzL.Pro/WG.1/11/4 of 19 December 1994, para. 11 and 18.

195 Cf. Executive Committee, Report of the 18th Meeting, UNEP/OzL.Pro./ExCom/18/75 of 24 November 1995, para. 44-46. The Interim Progress Report on Technology Transfer under the Multilateral Fund has been forwarded to the Seventh Meeting of the Parties as UNEP/OzL.Pro.7/10 of 24 November 1995.

196 Cf. Report of the Seventh Meeting of the Parties, Vienna, 5-7 December 1995, UNEP/OzL.Pro.7/12 of 27 December 1995, para. 85. As regards the dumping of ODS, the Economics Options Committee concluded that »although in principle the incentive is there for a shift of production facilities between developed and developing countries, there is hardly any evidence for it.« This finding is apparently being contested by developing countries. Cf. 1994 Report of the Economics Options Committee, 1995 Assessment (November 1994), p. 6-12.

197 Expert Group on the Production of Substitutes for Ozone-Depleting Substances, Report of the 1st Meeting as contained in Annex VI of the Report of the Executive Committee's 18th Meeting, UNEP/OzL.Pro./ExCom/18/75 of 24 November 1995, Recommendation No 5.

198 According to consultants of the Open-Ended Working Group and the Executive Committee, projects for substitute technologies and production of recovery and recycling equipment could be funded on a case-by-case basis, although no fundable projects have been submitted to the Fund's Executive Committee. Cf. COWIconsult, Study on the Financial Mechanism of the Montreal Protocol (UNEP: Nairobi, 1995), para. 69 et seq. The consultants state that »the issue of indigenous technology development for ODS replacement is

plained by the still unresolved question of whether Article 5 countries that have been fully supported by the Fund for indigenous development of non-ODS technology, are afterwards obliged to provide this technology — free of charge — to other Article 5 countries.<sup>199</sup> Nonetheless, during 1995 there has been substantial trade in ozone-benign technology between the least developed countries and the newly industrialising developing countries.<sup>200</sup> Since the Executive Committee may choose freely among providers of technology — unlike bilateral assistance programmes — the role of South-South trade may increase and thus alleviate Southern concerns of technological dependency.<sup>201</sup>

A final report on the transfer of technology to developing countries is currently under preparation and will be submitted to the Eighth Meeting of the Parties — to be held in November 1996 in Costa Rica — which will decide on the replenishment of the Fund and possibly also on further adjustments to the Protocol as regards developing countries.<sup>202</sup>

### *The issue of Russia*

From an environmentalist's point of view, questions of North-South co-operation might turn out rather negligible compared with environmental East-West co-operation. As Madhava Sarma, UNEP's chief executive on ozone policy, has recently pointed out, »the main cloud on the horizon hangs over the countries with their economies in transition (CEIT), which consume about 150,000 tonnes of ozone-depleting substances per year.«<sup>203</sup> Most important is the current non-compliance of the Russian Federation with its obligations under the Montreal Protocol: Russia

a difficult one for the Financial Mechanism, primarily because of the non-indigenous nature of the current reserve of technological experience in ODS phase-out.« Cf. also Open-Ended Working Group, Report of the 11th Meeting, UNEP/OzL.Pro/AVG.1/11/10 of 13 June 1995, para. 72.

<sup>199</sup> Cf. *supra* note 197.

<sup>200</sup> Cf. *OzonAction Newsletter* 17 (January 1996), p. 1.

<sup>201</sup> A consortium of consultants from Indian, Malaysia and the USA concluded in 1994, based on various country programmes, that »[w]hile no actual transfer of non-ODS technologies between Article 5 countries has been observed in the countries visited, such transfer is in the planning phases and will likely occur in the next year or two. In addition, transfer of skills and knowledge related to non-ODS technologies (as distinct from the technologies themselves) has occurred in some sectors.« The consultants' report has been published as: Open-Ended Working Group of the Parties, Report on the Review under Paragraph 8 of Article 5 of the Montreal Protocol, UNEP/OzL.Pro/WG.1/11/4 of 19 December 1994 [here: para. 13].

<sup>202</sup> Cf. the Terms of Reference for the Study on Technology Transfer (Draft), UNEP/OzL.Pro/ExCom/19/60 of 2 April 1996. The 19th Meeting of the Executive Committee could not agree on a final version of these terms of reference, which will again be debated by the 20th Meeting; cf. Executive Committee, Report of the 19th Meeting, UNEP/OzL.Pro./ExCom/19/64 of 10 May 1996, para. 67.

<sup>203</sup> This is less than the total ODS consumption in Article 5 consumption of about 210,000 ODS tonnes; however, whereas Southern ODS phase-out is being fully supported by the Fund, the phase-out policies in CEIT is only partly supported by GEF, which makes the final phase-out less likely. The quotation is from: Madhava Sarma, »Outlook good, with a few clouds«, in: *Our Planet* 7: 5 (1996), pp. 21-22.



does not pay its contributions to the Multilateral Fund, it does not report official data, it does not comply with the trade restrictions vis-à-vis non-parties, it is widely believed to be the main supplier of black market CFC, and — which is most worrisome — there are few indications that Russia will succeed in ODS phase-out in the coming years.<sup>204</sup>

Already in 1987 at the Montreal Conference, the delegate of the Soviet Union had called for amendments of the Protocol to make it more flexible and more responsive to the needs of individual countries.<sup>205</sup> However, unlike the 1992 Climate Convention,<sup>206</sup> no privileges for CEIT have been included into the Montreal Protocol. Since most CEIT are currently in non-compliance with their ODS reduction obligations, these parties repeatedly requested special exemptions, in particular a grace-period of up to five years and the exemption from financial obligations,<sup>207</sup> along with — so the statement of Russia — financial, technical and even »moral assistance«. <sup>208</sup> As regards financial support, most CEIT are not eligible for financial assistance by the Multilateral Fund, but are supported, to some extent, by the Global Environment Facility (cf. *supra*, p. 31).

204 Cf. on CEIT countries Dec. VII/15 (on Poland, which is in compliance), Dec. VII/16 (on Bulgaria), Dec. VII/17 (on Belarus), Dec. VII/19 (on Ukraine) and Dec. VII/18 (on the Russian Federation) of the Seventh Meeting of the Parties; cf. Report of the Seventh Meeting of the Parties, Vienna, 5-7 December 1995, UNEP/OzL.Pro.7/12 of 27 December 1995, para. 94.

205 Declaration by the delegate from the Soviet Union, reproduced in 26 ILM 1541 (1987).

206 Cf. Article 4, para. 6, of the 1992 UN Framework Convention on Climate Change: »In the implementation of their commitments under paragraph 2 above, a certain degree of flexibility shall be allowed by the Conference of the Parties to the Parties included in annex I undergoing the process of transition to a market economy, in order to enhance the ability of these Parties to address climate change, including with regard to the historical level of anthropogenic emissions of greenhouse gases not controlled by the Montreal Protocol chosen as a reference.« Cf. also the 1992 Forest Declaration, para. 9 (a): »The efforts of developing countries to strengthen the management, conservation and sustainable development of their forest resources should be supported by the international community [...]. In this respect, special attention should also be given to the countries undergoing the process of transition to market economies [...].«

207 Cf. Sixth Meeting of the Parties, Nairobi, 6-7 October 1994, UNEP/OzL.Pro.6/7 of 10 October 1994, para. 40 to 42. Cf. also Dec. V/10 of the Fifth Meeting of the Parties, Bangkok, 17-19 November 1993, UNEP/OzL.Pro.5/12 and the Declaration by Belarus, Bulgaria, Romania, Russian Federation, and Ukraine (*ibid.*, Annex VIII).

208 Cf. Open-Ended Working Group, Report of the 11th Meeting, UNEP/OzL.Pro/WG. 1/11/10 of 13 June 1995, para. 158-161.

## 7 CONCLUSION. LESSONS FOR THE CLIMATE REGIME

Summarising the last chapters, I would argue that industrialised countries have *cum grano salis* complied with their obligations under Article 10 of the Montreal Protocol as amended in 1990. They have paid — with the exception of former socialist countries — their contributions in full, though frequently with delays of up to one year. They have also paid the full incremental costs incurred by developing countries in their current ODS phase-out programmes, albeit with the exception of the (full) incremental operational costs.

And yet: the funds necessary were rather small, if not »peanuts«.

One half billion US-\$ (the total amount having been pledged for the Multilateral Fund) is only a drip in the desert if compared to the necessary North-South transfers when the implementation of the 1992 Climate and Biodiversity Conventions comes on the agenda.<sup>209</sup> In both these treaties, industrialised countries have also pledged to finance all agreed incremental costs of developing countries. Here, the drip in the desert would develop into a stream of North-South transfers. Is this to be expected? Nobody can say with certainty. What we can say, however, is that the story of the Multilateral Ozone Fund provides us with a number of lessons, which might be useful in the debate on the financial implications of the 1992 Conventions.

### *First Lesson: Nearly all incremental costs have been paid*

The analysis made clear that nearly all truly incremental costs — except full incremental operational costs — have been paid by the Fund. *Not more*: all attempts of individual developing countries or implementing agencies to put other issues on the bill proved to be unsuccessful and were, by consensus, not approved by the Executive Committee. The expansion of production facilities, the upgrading of technologies, the loss of profits — all these issues have been rejected by the Committee or, as regards the future reduction of operational costs, taken into consideration when calculating the grant amounts. Various careful distinctions have been developed during the work of the Executive Committee, and the North has not paid any

<sup>209</sup> For an overview, cf. Peter Hayes, »North-South carbon abatement costs«, in: Peter Hayes and Kirk Smith, *The Global Greenhouse Regime. Who pays?* (London: Earthscan Publications, 1993), pp. 101-143; and cf. Peter Hayes, »North-South transfer«, in *ibid.*, pp. 144-168.

dollar that did not cover truly incremental costs of developing countries. But the North has also paid *no less* than the full incremental costs: except for incremental operational costs, there are hardly any costs conceivable<sup>210</sup> that developing countries had to bear due to ODS phase-out and that have not been reimbursed by the Fund. This might constitute an important precedent for the implementation of the 1992 Conventions.

*Second Lesson: Savings have been accounted for*

The Executive Committee managed to agree on savings and benefits resulting from conversion projects and to subtract possible savings in the calculation of incremental costs. This might be of pivotal importance for the implementation of the Climate Convention and, to lesser extent, of the Biodiversity Convention. Projects for the reduction of carbon dioxide emissions regularly result in decreasing energy bills, which, if fully taken into account, will reduce the total incremental costs of the project. Many projects may even result in net benefits instead of losses and thus be possible already by way of concessional loans, for instance by means of an international revolving fund.

*Third Lesson: Co-operation overcame conflict*

The decision-making procedures under the Montreal Protocol proved to be effective. Equal voting powers of the groups of industrialised and developing countries did not prevent co-operation, but fostered consensus and mutual compromise. In fact, no votes have ever been taken in the Executive Committee of the Multilateral Fund. The »spirit of co-operation« under the financial mechanism is certainly one of the reasons that many developing countries decided to progress in country programmes on ODS phase-out, even when the wording of the Protocol requires complete phase-out only by 2010. The overall positive experiences with the operation of the Multilateral Fund might have provided an important precedent for

210 Costs which are not eligible according to present policy decisions by the Executive Committee, but which could be of use for the acceleration of ODS phase-out in developing countries, include, e.g., customer training, which may for instance be needed for manufactures of HFC compressors, or public awareness campaigns, or the training of an Article 5 country pool of technical experts to alleviate bottlenecks in project implementation coming from long waiting times between short visits of foreign experts, or the local testing and adapting of technologies because Northern substitute technologies will have to operate under different climatic conditions. Those cost categories have repeatedly mentioned by developing countries' representatives; cf. COWIconsult, Study on the Financial Mechanism of the Montreal Protocol (UNEP: Nairobi, 1995), para. 565 et seq.

the effective operation of similar procedures under the 1992 Rio Conventions, the GEF — and possibly even the reform of the Bretton Woods organisations.

*Fourth Lesson: North-South trading issues were effectively addressed*

It has been possible under the Montreal Protocol to identify and differently treat conversion projects whose funding might have resulted in (additional) distortion of competition in the North-South trade. Subsidiaries of transnational corporations, and Southern enterprises producing predominantly for export into industrialised countries, have been separated from other enterprises and not been reimbursed for their conversion projects, to the effect that they have to pay the same incremental costs as their competitors in Northern markets. This could also make the compensation of full incremental costs in the South more acceptable for industrialised countries.

*Fifth Lesson: Graduation and in-kind contributions proved to be acceptable*

Most countries with economies in transition were not in a position to contribute to the Fund in convertible currency, or at least: they did not pay. Those countries have been explicitly exempted from the financial obligations under the Climate Convention, although the Conference of the Parties may at any time decide to modify the lists of parties and include also Eastern European parties or Southern newly industrialising countries into the list of contributors. The Montreal Protocol set two precedents: first, it allowed for a graduation of developing countries based on *the per capita* consumption of environmentally harmful substances, which is the concept most likely to be accepted by developing countries. By this concept, some of the wealthier countries such as the United Arab Emirates were obliged to pay their share of the full incremental costs of their fellow developing countries, in addition to the duty of full compliance with the reduction schedule of industrialised countries. This graduation allows for sufficient flexibility in the definition of donors and recipients that will also be crucial for the acceptance of the implementation of the 1992 Conventions. Second, the Executive Committee of the Multilateral Fund explored and accepted various ways for donors to pay their contributions in kind, when they cannot contribute in convertible currency. This is again an important precedent for the 1992 Rio Conventions and could make it more acceptable for

Russia and other economies in transition to assume donor's obligations in the future.

### *Resume*

The Montreal Protocol is one of the rare examples of truly effective environmental regimes that led to substantial reductions of the emission of man-made substances harmful to the Earth's environment. This success has — as has repeatedly been stated by governmental representatives — its cause in the »partnership, with common but differentiated responsibilities, that it had established between developing and developed countries«<sup>211</sup> — a partnership, which is seen »at the heart of the ozone regime [and which is] based on a balanced and equitable sharing of efforts and commitments« between North and South.<sup>212</sup> Among all global environmental problems threatening human survival, governments apparently see the Vienna Convention and the Montreal Protocol as »more than treaties in and of themselves [but...] as models of cooperation on a global scale.«<sup>213</sup> Likewise, Mustafa Tolba — then UNEP Executive Director — opined that the Ozone Fund »constituted a model for international law [which] worked well because it was a financial mechanism that allowed developed and developing countries to participate as equals in the decision-making process.«<sup>214</sup>

Taking the five lessons outlined above into account, it appears not unlikely that industrialised countries will also — in the future implementation of the Conventions on Climate Change and Biodiversity — reimburse the incremental costs of developing countries incurred by them as regards those emerging regimes. The transfers necessary will certainly be substantial. However, the history of the ozone regime gives evidence that there are various ways to reduce the total costs — e.g. by taking all savings into account — without abrogating the concept of compensating the full incremental costs. The chances for equitable and fair North-South co-operation for the protection of the climate or biological diversity are thus, if not great, then at least not too small. And these experiences may even be of value regarding additional treaties in the future, such as global agreements on marine envi-

211 Cf. Report of the Seventh Meeting of the Parties, Vienna, 5-7 December 1995, UNEP/OzL.Pro.7/12 of 27 December 1995, para. 59.

212 Ibid, para. 71.

213 7fc;W.,para. 67.

214 Cf. Executive Committee, Report of the 8th Meeting, UNEP/OzL.Pro.ExCom/8/29/Corr. 1 of 12 November 1992, para. 5.

ronmental protection from land-based activities.<sup>215</sup> When these global issues come onto the agenda, similar financial and procedural provisions may be stipulated, and here, again, it is experience that counts.

215 In November 1995, the Washington Intergovernmental Conference to Adopt a Global Programme of Action for the Protection of the Marine Environment from Land-Based Activities called for a legally binding instrument on persistent organic pollutants (POPs). Such an agreement is hardly conceivable unless it is closely modelled on the Montreal Ozone Protocol. Because POPs such as DDT are mainly emitted in the South but are perceived as environmental problem especially by the Northern public, the reimbursement of the (full) incremental costs of developing countries will certainly be in the centre stage of negotiations, which are just beginning. A more comprehensive global Convention on the Protection of the Marine Environment — addressing also other sources of land-based pollution — has been called for in the early 1990s by Greenpeace and others, and recently by the German Advisory Council on Global Change (WGBU) in its 1995 Annual Report (Berlin: Springer 1996) and by the German NGO Forum on Environment and Development. Cf. also in more detail Frank Biermann, *Internationale Meeresumweltpolitik. Auf dem Weg zu einem Umweltregime für die Ozeane?* (Frankfurt am Main: Peter Lang 1994).



ANNEX A — LEGAL PROVISIONS ON NORTH-SOUTH  
TRANSFERS FOR THE PROTECTION OF THE  
ENVIRONMENT

**Treaties**

I MONTREAL PROTOCOL ON SUBSTANCES THAT DEplete THE OZONE  
LAYER [AS AMENDED]<sup>216</sup>

*The Parties to this Protocol,*

*Being Parties to the Vienna Convention for the Protection of the Ozone Layer, [...]*

*Acknowledging* that special provision is required to meet the needs of developing countries, including the provision of additional financial resources and access to relevant technologies, bearing in mind that the magnitude of funds necessary is predictable, and the funds 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,

*Considering* the importance of promoting international cooperation in the research, development and transfer of alternative technologies relating to the control and reduction of emissions of substances that deplete the ozone layer, bearing in mind in particular the needs of developing countries,

Have agreed as follows: [...]

ARTICLE 5 — SPECIAL SITUATION OF DEVELOPING COUNTRIES

1. Any Party that is a developing country and whose annual calculated level of consumption of the controlled substances in Annex A is less than 0.3 kilograms per capita on the date of the entry into force of the Protocol for it, or any time thereafter until 1 January 1999, shall, in order to meet its basic domestic needs, be entitled to delay for ten years its compliance with the control measures set out in Articles 2A to 2E, provided that any further amendments to the adjustments or Amendments adopted at the Second Meeting of the Parties in London, 29 June 1990, shall apply to the Parties operating under this paragraph after the review provided for in paragraph 8 of this Article has taken place and shall be based on the conclusions of that review.

1 *bis* The Parties shall, taking into account the review referred to in paragraph 8 of this Article, the assessments made pursuant to Article 6 and any other relevant information, decide by 1 January 1996, through the procedure set forth in paragraph 9 of Article 2:

<sup>216</sup> Montreal Protocol on Substances That Deplete the Ozone Layer, concluded at Montreal, 16 September 1987, in force 1 January 1989, as amended in 1990 and 1992 and including the 1995 Adjustments (cf. *supra* notes 7 to 10).



- (a) With respect to paragraphs 1 to 6 of Article 2F, what base year, initial levels, control schedules and phase-out date for consumption of the controlled substances in Group I of Annex C [*HCFC*] will apply to Parties operating under paragraph 1 of this Article;
- (b) With respect to Article 2G, what phase-out date for production and consumption of the controlled substances in Group II of Annex C will apply to Parties operating under paragraph 1 of this Article; and
- (c) With respect to Article 2H, what base year, initial levels and control schedules for consumption and production of the controlled substance in Annex E [*Methyl Bromide*] will apply to Parties operating under paragraph 1 of this Article.
2. However, any Party operating under paragraph 1 of this Article shall exceed neither an annual calculated level of consumption of the controlled substances in Annex A of 0.3 kilograms per capita nor an annual calculated level of consumption of the controlled substances of Annex B of 0.2 kilograms per capita. [...]
4. If a Party operating under paragraph 1 of this Article, at any time before the control measures obligations in Articles 2A to 2H become applicable to it, finds itself unable to obtain an adequate supply of controlled substances, it may notify this to the Secretariat. The Secretariat shall forthwith transmit a copy of such notification to the Parties, which shall consider the matter at their next Meeting, and decide upon appropriate action to be taken.
5. Developing the capacity to fulfill the obligations of the Parties operating under paragraph 1 of Article 5 to comply with the control measures set out in Article 2A to 2E, and any control measures in Articles 2F to 2H that are decided pursuant to paragraph 1 *bis* of this Article, and their implementation by those same Parties will depend upon the effective implementation of the financial co-operation as provided by Article 10 and transfer of technology as provided by Article 10A.
6. Any Party operating under paragraph 1 of Article 5 may, at any time, notify the Secretariat in writing that, having taken all practicable steps, it is unable to implement any or all of the obligations laid down in Articles 2A to 2E, or any or all obligations in Articles 2F to 2H that are decided pursuant to paragraph 1 *bis* of this Article, due to the inadequate implementation of Articles 10 and 10A. The Secretariat shall forthwith transmit a copy of the notification to the Parties, which shall consider the matter at their next Meeting, giving due recognition to paragraph 5 of this Article, and shall decide upon appropriate action to be taken.
7. During the period between notification and the Meeting of the Parties at which the appropriate action referred to in paragraph 6 of this Article is to be decided, or for a further period, if the Meeting of Parties so decides, the non-compliance procedures referred to in Article 8 shall not be invoked against the notifying Party.
8. A Meeting of Parties shall review, not later than 1995, the situation of the Parties operating under paragraph 1 of this Article, including the effective implementation of financial co-operation and transfer of technology to them, and adopt such revisions that may be deemed necessary regarding the schedule of control measures applicable to those Parties.
- 8 *bis* (a) With respect to the controlled substances in Annex A [*main CFCs and Halons*], a Party operating under paragraph 1 of this Article shall, in order to meet its basic domestic needs, be entitled to delay for ten years its compliance with the control measures adopted by the Second Meeting of the Parties in London, 29 June 1990, and reference by the Protocol to Articles 2A and 2B shall be read accordingly;
- (b) With respect to the controlled substances in Annex B, a Party operating under paragraph 1 of this Article shall, in order to meet its basic domestic needs, be entitled to delay for ten years its compliance with the control measures adopted by the Second Meeting of the Parties in London, 29 June 1990, and reference by the Protocol to Articles 2C to 2E shall be read accordingly.
- 8 *ter* Pursuant to paragraph 1 *bis* above:

(a) Each Party operating under paragraph 1 of this Article shall ensure that for the twelve month period commencing on 1 January 2016, and in each twelve-month period thereafter, its calculated level of consumption of the controlled substances in Group I of Annex C [*HCFC*] does not exceed, annually, its calculated level of consumption in 2015;

(b) Each Party operating under paragraph 1 of this Article shall ensure that for the twelve month period commencing on 1 January 2040, and in each twelve-month period thereafter, its calculated level of consumption of the controlled substances in Group I of Annex C [*HCFC*] does not exceed zero [...];

(d) With regard to the controlled substances contained in Annex E [*Methyl Bromide*]:

(i) As of 1 January 2002 each Party operating under paragraph 1 of this Article shall comply with the control measures set out in paragraph 1 of Article 2H and, as the basis for its compliance with these control measures, it shall use the average of its annual calculated level of consumption and production, respectively, for the period of 1995 to 1998 inclusive;

(ii) The calculated levels of consumption and production under this subparagraph shall not include the amounts used by the Party for quarantine and pre-shipment applications.

9. Decisions of the Parties referred to in paragraphs 4, 6 and 7 of this Article shall be taken according to the same procedure applied to decision-making under Article 10 [*para. 9*]. [...]

#### ARTICLE 10 — FINANCIAL MECHANISM

1. The Parties shall establish a mechanism for the purposes of providing financial and technical cooperation, including the transfer of technologies, to Parties operating under paragraph 1 of Article 5 of this Protocol to enable their compliance with the control measures set out in Articles 2A to 2E, and any control measures in Articles 2F to 2H that are decided pursuant to paragraph 1 *bis* of Article 5 of the Protocol. The mechanism, contributions to which shall be additional to other financial transfers to Parties operating under that paragraph, shall meet all agreed incremental costs of such Parties in order to enable their compliance with the control measures of the Protocol. An indicative list of the categories of incremental costs shall be decided by the meeting of the Parties.

2. The mechanism established under paragraph 1 shall include a Multilateral Fund. It may also include other means of multilateral, regional and bilateral cooperation.

3. The Multilateral Fund shall:

(a) Meet, on a grant or concessional basis as appropriate, and according to criteria to be decided upon by the Parties, the agreed incremental costs;

(b) Finance clearing-house functions to:

(i) Assist Parties operating under paragraph 1 of Article 5, through country specific studies and other technical co-operation, to identify their needs for cooperation;

(ii) Facilitate technical co-operation to meet these identified needs;

(iii) Distribute, as provided for in Article 9, information and relevant materials, and hold workshops, training sessions, and other related activities, for the benefit of Parties that are developing countries; and

(iv) Facilitate and monitor other multilateral, regional and bilateral co-operation available to Parties that are developing countries.

(c) Finance the secretarial services of the Multilateral Fund and related support costs.

4. The Multilateral Fund shall operate under the authority of the Parties who shall decide on its overall policies.

5. The Parties shall establish an Executive Committee to develop and monitor the implementation of specific operational policies, guidelines and administrative arrangements, including the

disbursement of resources, for the purpose of achieving the objectives of the Multilateral Fund. The Executive Committee shall discharge its tasks and responsibilities, specified in its terms of reference as agreed by the Parties, with the cooperation and assistance of the International Bank for Reconstruction and Development (World Bank), the United Nations Environment Programme, the United Nations Development Programme or other appropriate agencies depending on their respective areas of expertise. The members of the Executive Committee, which shall be selected on the basis of balanced representation of the Parties operating under paragraph 1 of Article 5 and of the Parties not so operating, shall be endorsed by the Parties.

6. The Multilateral Fund shall be financed by contributions from Parties not operating under paragraph 1 of Article 5 in convertible currency or, in certain circumstances, in kind and/or in national currency, on the basis of the United Nations scale of assessments. Contributions by other Parties shall be encouraged. Bilateral and, in particular cases agreed by a decision of the Parties, regional co-operation may, up to a percentage and consistent with any criteria to be specified by decision of the Parties, be considered as a contribution to the Multilateral Fund, provided that such cooperation, as a minimum:

- (a) Strictly relates to compliance with the provisions of this Protocol;
- (b) Provides additional resources; and
- (c) Meets agreed incremental costs.

7. The Parties shall decide upon the programme budget of the Multilateral Fund for each fiscal period and upon the percentage of contributions of the individual Parties thereto.

8. Resources under the Multilateral Fund shall be disbursed with the concurrence of the beneficiary Party.

9. Decisions by the Parties under this Article shall be taken by consensus whenever possible. If all efforts at consensus have been exhausted and no agreement reached, decisions shall be adopted by a two-thirds majority of the Parties present and voting, representing a majority of the Parties operating under paragraph 1 of Article 5 present and voting and a majority of the Parties not so operating present and voting.

10. The financial mechanism set out in this Article is without prejudice to any other future arrangements that may be developed with respect to other environmental issues.

#### ARTICLE 10A — TRANSFER OF TECHNOLOGY

Each Party shall take every practicable step, consistent with the programmes supported by the financial mechanism, to ensure:

- (a) That the best available, environmentally safe substitutes and related technologies are expeditiously transferred to Parties operating under paragraph 1 of Article 5, and
- (b) That such transfers referred to in subparagraph (a) occur under fair and most favourable conditions. [...]

## 1.2 UNITED NATIONS FRAMEWORK CONVENTION ON CLIMATE CHANGE<sup>217</sup>

*The Parties to this Convention,*

*Acknowledging* that change in the Earth's climate and its adverse effects are a common concern of humankind, [...]

*Acknowledging* that the global nature of climate change calls for the widest possible cooperation by all countries and their participation in an effective and appropriate international response, in accordance with their common but differentiated responsibilities and respective capabilities and their social and economic conditions, [...]

Have agreed as follows: [...]

### ARTICLE 3 — PRINCIPLES

In their actions to achieve the objective of the Convention and to implement its provisions, the Parties shall be guided, *inter alia*, by the following:

1. The Parties should protect the climate system for the benefit of present and future generations of humankind, on the basis of equity and in accordance with their common but differentiated responsibilities and respective capabilities. Accordingly, the developed country Parties should take the lead in combating climate change and the adverse effects thereof.
2. The specific needs and special circumstances of developing country Parties, especially those that are particularly vulnerable to the adverse effects of climate change, and of those Parties, especially developing country Parties, that would have to bear a disproportionate or abnormal burden under the Convention, should be given full consideration. [...]

### ARTICLE 4 — COMMITMENTS

3. The developed country Parties and other developed Parties included in annex II<sup>218</sup> shall provide new and additional financial resources to meet the agreed full costs incurred by developing country Parties in complying with their obligations under Article 12, paragraph 1. They shall also provide such financial resources, including for the transfer of technology, needed by the developing country Parties to meet the agreed full incremental costs of implementing measures that are covered by paragraph 1 of this Article<sup>219</sup> and that are agreed between a developing coun-

<sup>217</sup> Done New York, 9 May 1992, in force 21 March 1994; UN Doc. A/AC.237/18 (Part II) (Add. 1), Misc. 6; BGBl 1993 II, p. 1783; 31 ILM 849 (1992). On the emerging climate regime, cf. Udo E. Simonis, 'Towards a Houston Protocol' or How to Allocate CO<sub>2</sub>-Emissions Reductions between North and South, WZB Discussion Paper No FS II 94-404.

<sup>218</sup> Cf. Annex II: Australia, Austria, Belgium, Canada, Denmark, European Community, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Japan, Luxembourg, Netherlands, New Zealand, Norway, Portugal, Spain, Sweden, Switzerland, Turkey, United Kingdom of Great Britain and Northern Ireland, United States of America.

<sup>219</sup> Article 4, paragraph 1, obliges all parties, *inter alia*, to: »(a) Develop, periodically update, publish and make available to the Conference of the Parties, in accordance with Article 12, national inventories of anthropogenic emissions by sources and removals by sinks of all greenhouse gases not controlled by the Montreal Protocol, using comparable methodologies to be agreed upon by the Conference of the Parties, (b) Formulate, implement, publish and regularly update national and, where appropriate, regional programmes containing measures to mitigate climate change by addressing anthropogenic emissions by sources and removals by sinks of all greenhouse gases not controlled by the Montreal Protocol, and measures to facilitate adequate adaptation to climate change,

try Party and the international entity or entities referred to in Article 11, in accordance with that Article. The implementation of these commitments shall take into account the need for adequacy and predictability in the flow of funds and the importance of appropriate burden sharing among the developed country Parties.

4. The developed country Parties and other developed Parties included in annex II shall also assist the developing country Parties that are particularly vulnerable to the adverse effects of climate change in meeting costs of adaptation to those adverse effects.

5. The developed country Parties and other developed Parties included in annex II shall take all practicable steps to promote, facilitate and finance, as appropriate, the transfer of, or access to, environmentally sound technologies and know-how to other Parties, particularly developing country Parties, to enable them to implement the provisions of the Convention. In this process, the developed country Parties shall support the development and enhancement of endogenous capacities and technologies of developing country Parties. Other Parties and organizations in a position to do so may also assist in facilitating the transfer of such technologies. [...]

7. 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 and will take fully into account that economic and social development and poverty eradication are the first and overriding priorities of the developing country Parties.

8. In the implementation of the commitments in this Article, the Parties shall give full consideration to what actions are necessary under the Convention, including actions related to funding, insurance and the transfer of technology, to meet the specific needs and concerns of developing country Parties arising from the adverse effects of climate change and/or the impact of the implementation of response measures, especially on:

- (a) Small island countries
- (b) Countries with low-lying coastal areas
- (c) Countries with arid and semi-arid areas, forested areas and areas liable to forest decay
- (d) Countries with areas prone to natural disasters
- (e) Countries with areas liable to drought and desertification
- (f) Countries with areas of high urban atmospheric pollution
- (g) Countries with areas with fragile ecosystems, including mountainous ecosystems
- (h) Countries whose economies are highly dependent on income generated from the production, processing and export, and/or on consumption of fossil fuels and associated energy-intensive products, and
- (i) Land-locked and transit countries.

Further, the Conference of the Parties may take actions, as appropriate, with respect to this paragraph.

(c) Promote and cooperate in the development, application and diffusion, including transfer, of technologies, practices and processes that control, reduce or prevent anthropogenic emissions of greenhouse gases not controlled by the Montreal Protocol in all relevant sectors, including the energy, transport, industry, agriculture, forestry and waste management sectors,

(d) Promote sustainable management, and promote and cooperate in the conservation and enhancement, as appropriate, of sinks and reservoirs of all greenhouse gases not controlled by the Montreal Protocol, including biomass, forests and oceans as well as other terrestrial, coastal and marine ecosystems,

(e) Cooperate in preparing for adaptation to the impacts of climate change and develop and elaborate appropriate and integrated plans for coastal zone management, water resources and agriculture, and for the protection and rehabilitation of areas, particularly in Africa, affected by drought and desertification, as well as floods, [...].«

9. The Parties shall take full account of the specific needs and special situations of the least developed countries in their actions with regard to funding and transfer of technology. [...]

#### ARTICLE 11 — FINANCIAL MECHANISM

1. A mechanism for the provision of financial resources on a grant or concessional basis, including for the transfer of technology, is hereby defined. It shall function under the guidance of and be accountable to the Conference of the Parties, which shall decide on its policies, programme priorities and eligibility criteria related to this Convention. Its operation shall be entrusted to one or more existing international entities.

2. The financial mechanism shall have an equitable and balanced representation of all Parties within a transparent system of governance.

3. The Conference of the Parties and the entity or entities entrusted with the operation of the financial mechanism shall agree upon arrangements to give effect to the above paragraphs, which shall include the following:

(a) Modalities to ensure that the funded projects to address climate change are in conformity with the policies, programme priorities and eligibility criteria established by the Conference of the Parties

(b) Modalities by which a particular funding decision may be reconsidered in light of these policies, programme priorities and eligibility criteria

(c) Provision by the entity or entities of regular reports to the Conference of the Parties on its funding operations, which is consistent with the requirement for accountability set out in paragraph 1 above and

(d) Determination in a predictable and identifiable manner of the amount of funding necessary and available for the implementation of this Convention and the conditions under which that amount shall be periodically reviewed.

4. The Conference of the Parties shall make arrangements to implement the above mentioned provisions at its first session, reviewing and taking into account the interim arrangements referred to in Article 21, paragraph 3, and shall decide whether these interim arrangements shall be maintained. Within four years thereafter, the Conference of the Parties shall review the financial mechanism and take appropriate measures.

5. The developed country Parties may also provide and developing country Parties avail themselves of, financial resources related to the implementation of the Convention through bilateral, regional and other multilateral channels.

#### ARTICLE 12 — COMMUNICATION OF INFORMATION RELATED TO IMPLEMENTATION

1. In accordance with Article 4, paragraph 1 [*cf. supra note 219*], each Party shall communicate to the Conference of the Parties, through the secretariat, the following elements of information:

(a) A national inventory of anthropogenic emissions by sources and removals by sinks of all greenhouse gases not controlled by the Montreal Protocol, to the extent its capacities permit, using comparable methodologies to be promoted and agreed upon by the Conference of the Parties,

(b) A general description of steps taken or envisaged by the Party to implement the Convention and,

(c) Any other information that the Party considers relevant to the achievement of the objective of the Convention and suitable for inclusion in its communication, including, if feasible, material relevant for calculations of global emission trends. [...]

3. In addition, each developed country Party and each other developed Party included in annex II shall incorporate details of measures taken in accordance with Article 4, paragraphs 3, 4 and 5 [*cf. supra*].

4. Developing country Parties may, on a voluntary basis, propose projects for financing, including specific technologies, materials, equipment, techniques or practices that would be needed to implement such projects, along with, if possible, an estimate of all incremental costs, of the reductions of emissions and increments of removals of greenhouse gases, as well as an estimate of the consequent benefits. [...]

7. From its first session, the Conference of the Parties shall arrange for the provision to developing country Parties of technical and financial support, on request, in compiling and communicating information under this Article, as well as in identifying the technical and financial needs associated with proposed projects and response measures under Article 4. Such support may be provided by other Parties, by competent international organizations and by the secretariat, as appropriate. [...]

#### ARTICLE 21 — INTERIM ARRANGEMENTS

3. The Global Environment Facility of the United Nations Development Programme, the United Nations Environment Programme and the International Bank for Reconstruction and Development shall be the international entity entrusted with the operation of the financial mechanism referred to in Article 11 on an interim basis. In this connection, the Global Environment Facility should be appropriately restructured and its membership made universal to enable it to fulfil the requirements of Article 11 [*cf. infra*].

### 1.3 UNITED NATIONS CONVENTION ON BIOLOGICAL DIVERSITY<sup>220</sup>

*The Contracting Parties, [...]*

*Affirming* that the conservation of biological diversity is a common concern of humankind, [...]

*Acknowledging* that the provision of new and additional financial resources and appropriate access to relevant technologies can be expected to make a substantial difference in the world's ability to address the loss of biological diversity,

*Acknowledging* further that special provision is required to meet the needs of developing countries, including the provision of new and additional financial resources and appropriate access to relevant technologies,

*Noting* in this regard the special conditions of the least developed countries and small island States,

*Recognizing* that economic and social development and poverty eradication are the first and overriding priorities of developing countries,

Have agreed as follows: [...]

#### ARTICLE 16 — ACCESS TO AND TRANSFER OF TECHNOLOGY

1. Each Contracting Party, recognizing that technology includes biotechnology, and that both access to and transfer of technology among Contracting Parties are essential elements for the attainment of the objectives of this Convention, undertakes subject to the provisions of this Article to provide and/or facilitate access for and transfer to other Contracting Parties of technologies that are relevant to the conservation and sustainable use of biological diversity or make use of genetic resources and do not cause significant damage to the environment.

2. Access to and transfer of technology referred to in paragraph 1 above to developing countries shall be provided and/or facilitated under fair and most favourable terms, including on concessional and preferential terms where mutually agreed, and, where necessary, in accordance with the financial mechanism established by Articles 20 and 21 [*cf. infra*]. In the case of technology subject to patents and other intellectual property rights, such access and transfer shall be provided on terms which recognize and are consistent with the adequate and effective protection of intellectual property rights. The application of this paragraph shall be consistent with paragraphs 3, 4 and 5 below.

3. Each Contracting Party shall take legislative, administrative or policy measures, as appropriate, with the aim that Contracting Parties, in particular those that are developing countries, which provide genetic resources are provided access to and transfer of technology which makes use of those resources, on mutually agreed terms, including technology protected by patents and other intellectual property rights, where necessary, through the provisions of Articles 20 and 21 and in accordance with international law and consistent with paragraphs 4 and 5 below.

4. Each Contracting Party shall take legislative, administrative or policy measures, as appropriate, with the aim that the private sector facilitates access to, joint development and transfer of technology referred to in paragraph 1 above for the benefit of both governmental institutions and the private sector of developing countries and in this regard shall abide by the obligations included in paragraphs 1,2 and 3 above. [...]

<sup>220</sup> Done at Rio de Janeiro, 5 June 1992, in force 29 December 1993, in: 31 ILM 818 (1992). On the biodiversity politics cf. the recent WZB discussion papers by Birga Dexel, 'Internationaler Artenschutz. Neuere Entwicklungen', No FS II 95-401 [analysing CITES]; and Jessica Suplie, 'Streit auf Noahs Arche'. Zur Genese der Biodiversitäts-Konvention, No FS II 95-406 [analysing the Convention on Biological Diversity].



#### ARTICLE 19 — HANDLING OF BIOTECHNOLOGY AND DISTRIBUTION OF ITS BENEFITS

1. Each Contracting Party shall take legislative, administrative or policy measures, as appropriate, to provide for the effective participation in biotechnological research activities by those Contracting Parties, especially developing countries, which provide the genetic resources for such research, and where feasible in such Contracting Parties.
2. Each Contracting Party shall take all practicable measures to promote and advance priority access on a fair and equitable basis by Contracting Parties, especially developing countries, to the results and benefits arising from biotechnologies based upon genetic resources provided by those Contracting Parties. Such access shall be on mutually agreed terms. [...]

#### ARTICLE 20 — FINANCIAL RESOURCES

1. Each Contracting Party undertakes to provide, in accordance with its capabilities, financial support and incentives in respect of those national activities which are intended to achieve the objectives of this Convention, in accordance with its national plans, priorities and programmes.
2. The developed country Parties shall provide new and additional financial resources to enable developing country Parties to meet the agreed full incremental costs to them of implementing measures which fulfil the obligations of this Convention and to benefit from its provisions and which costs are agreed between a developing country Party and the institutional structure referred to in Article 21 [*cf. infra*], in accordance with policy, strategy, programme priorities and eligibility criteria and an indicative list of incremental costs established by the Conference of the Parties. Other Parties, including countries undergoing the process of transition to a market economy, may voluntarily assume the obligations of the developed country Parties. For the purpose of this Article, the Conference of the Parties, shall at its first meeting establish a list of developed country Parties and other Parties which voluntarily assume the obligations of the developed country Parties. The Conference of the Parties shall periodically review and if necessary amend the list. Contributions from other countries and sources on a voluntary basis would also be encouraged. The implementation of these commitments shall take into account the need for adequacy, predictability and timely flow of funds and the importance of burden-sharing among the contributing Parties included in the list.
3. The developed country Parties may also provide, and developing country Parties avail themselves of, financial resources related to the implementation of this Convention through bilateral, regional and other multilateral channels.
4. The extent to which developing country Parties will effectively implement their commitments under this Convention will depend on the effective implementation by developed country Parties of their commitments under this Convention related to financial resources and transfer of technology and will take fully into account the fact that economic and social development and eradication of poverty are the first and overriding priorities of the developing country Parties.
5. The Parties shall take full account of the specific needs and special situation of least developed countries in their actions with regard to funding and transfer of technology.
6. The Contracting Parties shall also take into consideration the special conditions resulting from the dependence on, distribution and location of, biological diversity within developing country Parties, in particular small island States.
7. Consideration shall also be given to the special situation of developing countries, including those that are most environmentally vulnerable, such as those with arid and semi-arid zones, coastal and mountainous areas.

#### ARTICLE 21 — FINANCIAL MECHANISM

1. There shall be a mechanism for the provision of financial resources to developing country Parties for purposes of this Convention on a grant or concessional basis the essential elements of

which are described in this Article. The mechanism shall function under the authority and guidance of, and be accountable to, the Conference of the Parties for purposes of this Convention. The operations of the mechanism shall be carried out by such institutional structure as may be decided upon by the Conference of the Parties at its first meeting. For purposes of this Convention, the Conference of the Parties shall determine the policy, strategy, programme priorities and eligibility criteria relating to the access to and utilization of such resources. The contributions shall be such as to take into account the need for predictability, adequacy and timely flow of funds referred to in Article 20 in accordance with the amount of resources needed to be decided periodically by the Conference of the Parties and the importance of burden-sharing among the contributing Parties included in the list referred to in Article 20, paragraph 2. Voluntary contributions may also be made by the developed country Parties and by other countries and sources. The mechanism shall operate within a democratic and transparent system of governance.

2. Pursuant to the objectives of this Convention, the Conference of the Parties shall at its first meeting determine the policy, strategy and programme priorities, as well as detailed criteria and guidelines for eligibility for access to and utilization of the financial resources including monitoring and evaluation on a regular basis of such utilization. The Conference of the Parties shall decide on the arrangements to give effect to paragraph 1 above after consultation with the institutional structure entrusted with the operation of the financial mechanism.

3. The Conference of the Parties shall review the effectiveness of the mechanism established under this Article, including the criteria and guidelines referred to in paragraph 2 above, not less than two years after the entry into force of this Convention and thereafter on a regular basis. Based on such review, it shall take appropriate action to improve the effectiveness of the mechanism if necessary.

4. The Contracting Parties shall consider strengthening existing financial institutions to provide financial resources for the conservation and sustainable use of biological diversity. [...]

#### ARTICLE 39 — FINANCIAL INTERIM ARRANGEMENTS

Provided that it has been fully restructured in accordance with the requirements of Article 21, the Global Environment Facility of the United Nations Development Programme, the United Nations Environment Programme and the International Bank for Reconstruction and Development shall be the institutional structure referred to in Article 21 on an interim basis, for the period between the entry into force of this Convention and the first meeting of the Conference of the Parties or until the Conference of the Parties decides which institutional structure will be designated in accordance with Article 21.

#### 1.4 UNITED NATIONS CONVENTION TO COMBAT DESERTIFICATION IN THOSE COUNTRIES EXPERIENCING SERIOUS DROUGHT AND/OR DESERTIFICATION, PARTICULARLY IN AFRICA<sup>221</sup>

*The Parties to this Convention,*

*Acknowledging* that desertification and drought are problems of global dimension in that they affect all regions of the world and that joint action of the international community is needed to combat desertification and/or mitigate the effects of drought, [...]

*Recognizing* also the importance and necessity of international cooperation and partnership in combating desertification and mitigating the effects of drought,

*Recognizing* further the importance of the provision to affected developing countries, particularly in Africa, of effective means, *inter alia*, substantial financial resources, including new and additional funding, and access to technology, without which it will be difficult for them to implement fully their commitments under this Convention, [...]

*Bearing also* in mind the contribution that combating desertification can make to achieving the objectives of the United Nations Framework Convention on Climate Change, the Convention on Biological Diversity and other related environmental conventions,

Have agreed as follows: [...]

##### ARTICLE 4 — GENERAL OBLIGATIONS

1. The Parties shall implement their obligations under this Convention, individually or jointly, either through existing or prospective bilateral and multilateral arrangements or a combination thereof, as appropriate, emphasizing the need to coordinate efforts and develop a coherent long-term strategy at all levels.
2. In pursuing the objective of this Convention, the Parties shall: [...]
  - (b) give due attention, within the relevant international and regional bodies, to the situation of affected developing country Parties with regard to international trade, marketing arrangements and debt with a view to establishing an enabling international economic environment conducive to the promotion of sustainable development;
  - (c) integrate strategies for poverty eradication into efforts to combat desertification and mitigate the effects of drought; [...] and
  - (h) promote the use of existing bilateral and multilateral financial mechanisms and arrangements that mobilize and channel substantial financial resources to affected developing country Parties in combating desertification and mitigating the effects of drought.
3. Affected developing country Parties are eligible for assistance in the implementation of the Convention.

##### ARTICLE 6 — OBLIGATIONS OF DEVELOPED COUNTRY PARTIES

In addition to their general obligations pursuant to Article 4, developed country Parties undertake to:

<sup>221</sup> Done at Paris, 17 June 1994, not in force; UN GA Doc. A/AC.241/15/Rev.7; in: 33 ILM 1328 (1994).

(a) actively support, as agreed, individually or jointly, the efforts of affected developing country Parties, particularly those in Africa, and the least developed countries, to combat desertification and mitigate the effects of drought;

(b) provide substantial financial resources and other forms of support to assist affected developing country Parties, particularly those in Africa, effectively to develop and implement their own long-term plans and strategies to combat desertification and mitigate the effects of drought;

(c) promote the mobilization of new and additional funding pursuant to Article 20, paragraph 2 (b);

(d) encourage the mobilization of funding from the private sector and other non-governmental sources; and

(e) promote and facilitate access by affected country Parties, particularly affected developing country Parties, to appropriate technology, knowledge and know-how. [...]

#### ARTICLE 20 — FINANCIAL RESOURCES

1. Given the central importance of financing to the achievement of the objective of the Convention, the Parties, taking into account their capabilities, shall make every effort to ensure that adequate financial resources are available for programmes to combat desertification and mitigate the effects of drought.

2. In this connection, developed country Parties, while giving priority to affected African country Parties without neglecting affected developing country Parties in other regions, in accordance with Article 7, undertake to:

(a) mobilize substantial financial resources, including grants and concessional loans, in order to support the implementation of programmes to combat desertification and mitigate the effects of drought;

(b) promote the mobilization of adequate, timely and predictable financial resources, including new and additional funding from the Global Environment Facility of the agreed incremental costs of those activities concerning desertification that relate to its four focal areas, in conformity with the relevant provisions of the Instrument establishing the Global Environment Facility;

(c) facilitate through international cooperation the transfer of technology, knowledge and know-how; and

(d) explore, in cooperation with affected developing country Parties, innovative methods and incentives for mobilizing and channelling resources, including those of foundations, non-governmental organizations and other private sector entities, particularly debt swaps and other innovative means which increase financing by reducing the external debt burden of affected developing country Parties, particularly those in Africa.

3. Affected developing country Parties, taking into account their capabilities, undertake to mobilize adequate financial resources for the implementation of their national action programmes.

4. In mobilizing financial resources, the Parties shall seek full use and continued qualitative improvement of all national, bilateral and multilateral funding sources and mechanisms, using consortia, joint programmes and parallel financing, and shall seek to involve private sector funding sources and mechanisms, including those of non-governmental organizations. To this end, the Parties shall fully utilize the operational mechanisms developed pursuant to Article 14.

5. In order to mobilize the financial resources necessary for affected developing country Parties to combat desertification and mitigate the effects of drought, the Parties shall:

(a) rationalize and strengthen the management of resources already allocated for combating desertification and mitigating the effects of drought by using them more effectively and

efficiently, assessing their successes and shortcomings, removing hindrances to their effective use and, where necessary, reorienting programmes in light of the integrated long-term approach adopted pursuant to this Convention;

(b) give due priority and attention within the governing bodies of multilateral financial institutions, facilities and funds, including regional development banks and funds, to supporting affected developing country Parties, particularly those in Africa, in activities which advance implementation of the Convention, notably action programmes they undertake in the frame work of regional implementation annexes; and

(c) examine ways in which regional and subregional cooperation can be strengthened to support efforts undertaken at the national level.

6. Other Parties are encouraged to provide, on a voluntary basis, knowledge, know-how and techniques related to desertification and/or financial resources to affected developing country Parties.

7. The full implementation by affected developing country Parties, particularly those in Africa, of their obligations under the Convention will be greatly assisted by the fulfilment by developed country Parties of their obligations under the Convention, including in particular those regarding financial resources and transfer of technology. In fulfilling their obligations, developed country Parties should take fully into account that economic and social development and poverty eradication are the first priorities of affected developing country Parties, particularly those in Africa.

#### ARTICLE 21 — FINANCIAL MECHANISMS

1. The Conference of the Parties shall promote the availability of financial mechanisms and shall encourage such mechanisms to seek to maximize the availability of funding for affected developing country Parties, particularly those in Africa, to implement the Convention. To this end, the Conference of the Parties shall consider for adoption *inter alia* approaches and policies that:

(a) facilitate the provision of necessary funding at the national, subregional, regional and global levels for activities pursuant to relevant provisions of the Convention;

(b) promote multiple-source funding approaches, mechanisms and arrangements and their assessment, consistent with Article 20;

(c) provide on a regular basis, to interested Parties and relevant intergovernmental and non-governmental organizations, information on available sources of funds and on funding patterns in order to facilitate coordination among them;

(d) facilitate the establishment, as appropriate, of mechanisms, such as national desertification funds, including those involving the participation of non-governmental organizations, to channel financial resources rapidly and efficiently to the local level in affected developing country Parties; and

(e) strengthen existing funds and financial mechanisms at the subregional and regional levels, particularly in Africa, to support more effectively the implementation of the Convention.

2. The Conference of the Parties shall also encourage the provision, through various mechanisms within the United Nations system and through multilateral financial institutions, of support at the national, subregional and regional levels to activities that enable developing country Parties to meet their obligations under the Convention.

3. Affected developing country Parties shall utilize, and where necessary, establish and/or strengthen, national coordinating mechanisms, integrated in national development programmes, that would ensure the efficient use of all available financial resources. They shall also utilize participatory processes involving non-governmental organizations, local groups and the private sector, in raising funds, in elaborating as well as implementing programmes and in assuring

access to funding by groups at the local level. These actions can be enhanced by improved coordination and flexible programming on the part of those providing assistance.

4. In order to increase the effectiveness and efficiency of existing financial mechanisms, a Global Mechanism to promote actions leading to the mobilization and channelling of substantial financial resources, including for the transfer of technology, on a grant basis, and/or on concessional or other terms, to affected developing country Parties, is hereby established. This Global Mechanism shall function under the authority and guidance of the Conference of the Parties and be accountable to it.

5. The Conference of the Parties shall identify, at its first ordinary session, an organization to house the Global Mechanism. The Conference of the Parties and the organization it has identified shall agree upon modalities for this Global Mechanism to ensure *inter alia* that such Mechanism:

(a) identifies and draws up an inventory of relevant bilateral and multilateral cooperation programmes that are available to implement the Convention;

(b) provides advice, on request, to Parties on innovative methods of financing and sources of financial assistance and on improving the coordination of cooperation activities at the national level;

(c) provides interested Parties and relevant intergovernmental and non-governmental organizations with information on available sources of funds and on funding patterns in order to facilitate coordination among them; and

(d) reports to the Conference of the Parties, beginning at its second ordinary session, on its activities.

6. The Conference of the Parties shall, at its first session, make appropriate arrangements with the organization it has identified to house the Global Mechanism for the administrative operations of such Mechanism, drawing to the extent possible on existing budgetary and human resources.

7. The Conference of the Parties shall, at its third ordinary session, review the policies, operational modalities and activities of the Global Mechanism accountable to it pursuant to paragraph 4, taking into account the provisions of Article 7. On the basis of this review, it shall consider and take appropriate action. [...]

## II OTHER LEGAL DOCUMENTS

### II. 1 STOCKHOLM DECLARATION ON THE HUMAN ENVIRONMENT (1972)

*The United Nations Conference on the Human Environment,*

*Having met at Stockholm from 5 to 16 June 1972,*

*Having considered the need for 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, [...]*

*States the common conviction that: [...]*

PRINCIPLE 9: Environmental deficiencies generated by the conditions of under-development and natural disasters pose grave problems and can best be remedied by accelerated development through the transfer of substantial quantities of financial and technological assistance as a supplement to the domestic effort of the developing countries and such timely assistance as may be required.

PRINCIPLE 10: For the developing countries, stability of prices and adequate earnings for primary commodities and raw material are essential to environmental management since economic factors as well as ecological processes must be taken into account.

PRINCIPLE 11: The environmental policies of all States should enhance and not adversely affect the present or future development potential of developing countries, nor should they hamper the attainment of better living conditions for all, and appropriate steps should be taken by States and international organizations with a view to reaching agreement on meeting the possible national and international economic consequences resulting from the application of environmental measures.

PRINCIPLE 12: Resources should be made available to preserve and improve the environment, taking into account the circumstances and particular requirements of developing countries and any costs which may emanate from their incorporating environmental safeguards into their development planning and the need for making available to them, upon their request, additional international technical and financial assistance for this purpose.

PRINCIPLE 20: Scientific research and development in the context of environmental problems, both national and multinational, must be promoted in all countries, especially the developing countries. In this connexion, the free flow of up-to-date scientific information and transfer of experience must be supported and assisted, to facilitate the solution of environmental problems, environmental technologies should be made available to developing countries on terms which would encourage their wide dissemination without constituting an economic burden on the developing countries.

## II.2 RIO DECLARATION ON ENVIRONMENT AND DEVELOPMENT (1992)<sup>222</sup>

*The United Nations Conference on Environment and Development,*

*Having met at Rio de Janeiro from 3 to 14 June 1992, [...]*

*With the goal of establishing a new and equitable global partnership through the creation of new levels of cooperation among States, key sectors of societies and people, [...]*

*Proclaims that: [...]*

PRINCIPLE 3: The right to development must be fulfilled so as to equitably meet developmental and environmental needs of present and future generations. [...]

PRINCIPLE 5: All States and all people shall cooperate in the essential task of eradicating poverty as an indispensable requirement for sustainable development, in order to decrease the disparities in standards of living and better meet the needs of the majority of the people of the world.

PRINCIPLE 6: The special situation and needs of developing countries, particularly the least developed and those most environmentally vulnerable, shall be given special priority. International actions in the field of environment and development should also address the interests and needs of all countries.

PRINCIPLE 7: States shall cooperate in a spirit of global partnership to conserve, protect and restore the health and integrity of the Earth's ecosystem. In view of the different contributions to global environmental degradation, States have common but differentiated responsibilities. The developed countries acknowledge the responsibility that they bear in the international pursuit of sustainable development in view of the pressures their societies place on the global environment and of the technologies and financial resources they command. [...]

PRINCIPLE 9: States should cooperate to strengthen endogenous capacity-building for sustainable development by improving scientific understanding through exchanges of scientific and technological knowledge, and by enhancing the development, adaptation, diffusion and transfer of technologies, including new and innovative technologies. [...]

222 A/CONF.151/5/Rev.1 of 13 June 1992, in: 31 ILM 874 (1992).



## II. 3 NON-LEGALLY BINDING AUTHORITATIVE STATEMENT OF PRINCIPLES FOR A GLOBAL CONSENSUS ON THE MANAGEMENT, CONSERVATION AND SUSTAINABLE DEVELOPMENT OF ALL TYPES OF FORESTS (1992)<sup>223</sup>

### PREAMBLE [...]

(d) These principles reflect a first global consensus on forests. In committing themselves to the prompt implementation of these principles, countries also decide to keep them under assessment for their adequacy with regard to further international cooperation on forest issues. [...]

### PRINCIPLES/ELEMENTS [...]

1. [...] (b) The agreed full incremental cost of achieving benefits associated with forest conservation and sustainable development requires increased international cooperation and should be equitably shared by the international community. [...]

7. [...] (b) Specific financial resources should be provided to developing countries with significant forest areas which establish programmes for the conservation of forest including protected natural forest areas. These resources should be directed notably to economic sectors which would stimulate economic and social substitution activities. [...]

(c) The implementation of national policies and programmes aimed at forest management, conservation and sustainable development, particularly in developing countries, should be supported by international financial technological cooperation, including through the private sector, where appropriate. [...]

9. (a) The efforts of developing countries to strengthen the management, conservation and sustainable development of their forest resources should be supported by the international community, taking into account the importance of redressing external indebtedness, particularly where aggravated by the net transfer of resources to developed countries, as well as the problem of achieving at least the replacement value of forests through improved market access for forest products, especially processed products. In this respect, special attention should also be given to the countries undergoing the process of transition to market economies. [...]

10. New and additional financial resources should be provided to developing countries to enable them to sustainably manage, conserve and develop their forest resources, including through afforestation, reforestation and combating deforestation and forest and land degradation.

11. In order to enable, in particular, developing countries to enhance their endogenous capacity and to better manage, conserve and develop their forest resources, the access to and transfer of environmentally sound technologies and corresponding know-how on favourable terms, including on concessional and preferential terms, as mutually agreed, in accordance with the relevant provisions of Agenda 21, should be promoted, facilitated and financed, as appropriate.

<sup>223</sup> Adopted at the 1992 United Nations Conference on Environment and Development, A/CONF.151/6/Rev.1 of 13 June 1992, in: 31 ILM 881 (1992). On international forests policies cf. the WZB discussion paper by Frank Hönerbach, Verhandlungen einer Waldkonvention. Ihr Ansatz und ihr Scheitern, No FS II 96-404.

## II.4 INSTRUMENT FOR THE ESTABLISHMENT OF THE RESTRUCTURED GLOBAL ENVIRONMENT FACILITY (1994)224

### PREAMBLE

*Whereas:*

- (a) The Global Environment Facility (GEF or the Facility) was established in the International Bank for Reconstruction and Development (IBRD or World Bank) as a pilot program in order to assist in the protection of the global environment and promote thereby environmentally sound and sustainable economic development, by resolution of the Executive Directors of the World Bank and related interagency arrangements between the United Nations Development Programme (UNDP) and the United Nations Environment Programme (UNEP), and the World Bank;
- (b) In April 1992, Participants in the GEF agreed that its structure and modalities should be modified. Agenda 21 [...], the United Nations Framework Convention on Climate Change and the Convention on Biological Diversity subsequently called for the restructuring of the Facility; [...]
- (f) The Implementing Agencies have reached a common understanding of principles for co-operation as set forth in the present Instrument, subject to approval of their participation by the respective governing bodies;

*It is resolved as follows: [...]*

2. The GEF shall operate, on the basis of collaboration and partnership among the Implementing Agencies, as a mechanism for international cooperation for the purpose of providing new and additional grant and concessional funding to meet the agreed incremental costs of measures to achieve agreed global environmental benefits in the following focal areas:
- (a) climate change,
  - (b) biological diversity,
  - (c) international waters, and
  - (d) ozone layer protection.
3. The agreed incremental costs of activities concerning land degradation, primarily desertification and deforestation, as they relate to the four focal areas shall be eligible for funding. The agreed incremental costs of other relevant activities under Agenda 21 that may be agreed by the Council shall be eligible for funding insofar as they achieve global environmental benefits by protecting the global environment in the four focal areas. [...]
6. In partial fulfillment of its purposes, the GEF shall, on an interim basis, operate the financial mechanism for the implementation of the United Nations Framework Convention on Climate Change and shall be, on an interim basis, the institutional structure which carries out the operation of the financial mechanism for the implementation of the Convention on Biological Diversity [...]. The GEF shall be available to continue to serve for the purposes of the financial mechanisms for the implementation of those conventions if it is requested to do so by their Conference of the Parties. In both respects, the GEF shall function under the guidance of, and become accountable to, the Conference of the Parties which shall decide on policies, program priorities and eligibility criteria for the purposes of the conventions. [...]
11. The GEF shall have an Assembly, a Council and a Secretariat. [...]

224 Global Environment Facility, Participants: Instrument for the Establishment of the Restructured Global Environment Facility, 16 March 1994; reprinted in 33 ILM 1273 (1994) and in Nord-Süd aktuell 8: 1 (1994), pp. 162-167.

16. The Council shall consist of 32 Members, representing constituency groupings formulated and distributed taking into account the need for balanced and equitable representation of all Participants and giving due weight to the funding efforts of all donors. There shall be 16 Members from developing countries, 14 Members from developed countries and 2 Members from the countries of central and eastern Europe and the former Soviet Union [...].

22. The Implementing Agencies of the GEF shall be UNDP, UNEP, and the World Bank. The Implementing Agencies shall be accountable to the Council for their GEF-financed activities, including the preparation and cost-effectiveness of GEF projects, and for the implementation of the operational policies, strategies and decisions of the Council within their respective areas of competence and in accordance with an interagency agreement [...]. The Implementing Agencies shall cooperate with the Participants, the Secretariat, parties receiving assistance under the GEF, and other interested parties, including local communities and non-governmental organizations, to promote the purposes of the Facility. [...]

#### PRINCIPLES OF DECISION-MAKING

25. (a) *Procedure*: The Assembly and the Council shall each adopt by consensus regulations as may be necessary or appropriate to perform their respective functions transparently; in particular, they shall determine any aspect of their respective procedures, including the admission of observers and, in the case of the Council, provision for executive sessions.

(b) *Consensus*: Decisions of the Assembly and the Council shall be taken by consensus. In the case of the Council if, in the consideration of any matter of substance, all practicable efforts by the Council and its Chairperson have been made and no consensus appears attainable, any member of the Council may require a formal vote.

(c) *Formal Vote*:

(i) Unless otherwise provided in this Instrument, decisions requiring a formal vote by the Council shall be taken by a double weighted majority, that is, an affirmative vote representing both a 60 percent majority of the total number of Participants and a 60 percent majority of the total contributions.

(ii) Each Member of the Council shall cast the votes of the Participant or Participants he/she represents. A Member of the Council appointed by a group of Participants may cast separately the votes of each Participant in the constituency he/she represents.

(iii) For the purpose of voting power, total contributions shall consist of the actual cumulative contributions made to the GEF Trust Fund as specified in Annex C (Attachment 1) and in subsequent replenishments of the GEF Trust Fund, contributions made to the GET<sup>225</sup>, and the grant equivalent of co-financing and parallel financing made the GET pilot program, or agreed with the Trustee, until the effective date of the GEF Trust Fund. [...]

<sup>225</sup> The Global Environment Trust Fund, the predecessor of the GEF Trust Fund from 1991 to 1994, replaced by this agreement according to paragraphs 8 and 32.

## ANNEX B — LIST OF PARTIES TO THE OZONE TREATIES

List of parties to the 1985 Vienna Convention and the 1987 Montreal Protocol as amended in 1990 and 1992, as of 30 June 1996.<sup>226</sup> »Ratification« includes instruments of acceptance, accession, approval, and succession.

Country	Vienna Convention		Montreal Protocol		1990	1992
	Signed	Ratified	Signed	Ratified	Ratified	Ratified
Afghanistan						
Albania						
Algeria		20 Oct 92		20 Oct 92	20 Oct 92	
Andorra						
Angola						
Antigua and Barbuda		3 Dec 92		3 Dec 92	23 Feb 93	19 Jul 93
Argentina	22 Mar 85	18 Jan 90	29 Jun 88	18 Sep 90	4 Dec 92	20 Apr 95
Armenia						
Australia		16 Sep 87	8 Jun 88	19 May 89	11 Aug 92	30 Jun 94
Austria	16 Sep 85	19 Aug 87	29 Aug 88	3 May 89	11 Dec 92	
Azerbaijan		12 Jun 96		12 Jun 96	12 Jun 96	12 Jun 96
Bahamas		1 Apr 93		4 May 93	4 May 93	4 May 93
Bahrain		27 Apr 90		27 Apr 90	23 Dec 92	
Bangladesh		2 Aug 90		2 Aug 90	18 Mar 94	
Barbados		16 Oct 92		16 Oct 92	20 Jul 94	20 Jul 94
Belarus	22 Mar 85	20 Jun 86	22 Jan 88	31 Oct 88	10 Jun 96	
Belgium	22 Mar 85	17 Oct 88	16 Sep 87	30 Dec 88	5 Oct 93	
Belize						
Benin		1 Jul 93		1 Jul 93		

<sup>226</sup> Source is UN Doc. ST/LEG/SER.E/12, updated by UNEP/OzL./Rat.SO, and personal communication by Mr. G. M. Bankobeza, the Ozone Secretariat's Legal Officer. Cuba and Saint Kitts and Nevis ratified the 1992 Amendment before the 1990 Amendment which is legally not possible under the terms of the Protocol. Clarification is currently undertaken. For updates see <http://www.unep.org/unep/secretar/ozone/ratifl.htm>.

Country	Vienna Convention		Montreal Protocol		1990	1992
	Signed	Ratified	Signed	Ratified	Ratified	Ratified
Bhutan						
Bolivia		3 Oct 94		3 Oct 94	3 Oct 94	3 Oct 94
Bosnia and Herzegovina		1 Sep 93		1 Sep 93		
Botswana		4 Dec 91		4 Dec 91		
Brazil		19 Mar 90		19 Mar 90	1 Oct 92	
Brunei Darussalam		26 Jul 90		27 May 93		
Bulgaria		20 Nov 90		20 Nov 90		
Burkina Faso	12 Dec 85	30 Mar 89	14 Sep 88	20 Jul 89	10 Jun 94	12 Dec 95
Burundi						
Cambodia						
Cameroon		30 Aug 89		30 Aug 89	8 Jun 92	25 Jun 96
Canada	22 Mar 85	4 Jun 86	16 Sep 87	30 Jun 88	5 Jul 90	16 Mar 94
Cape Verde						
Central African Rep.		29 Mar 93		29 Mar 93		
Chad		18 May 89		7 Jun 94		
Chile	22 Mar 85	6 Mar 90	14 Jun 88	26 Mar 90	9 Apr 92	14 Jan 94
China		11 Sep 89		14 Jun 91	14 Jun 91	
Colombia		16 Jul 90		6 Dec 93	6 Dec 93	
Comoros		31 Oct 94		31 Oct 94	31 Oct 94	
Congo		16 Nov 94	15 Sep 88	16 Nov 94	16 Nov 94	
Cook Islands						
Costa Rica		30 Jul 91		30 Jul 91		
Côte d'Ivoire		5 Apr 93		5 Apr 93	18 May 94	
Croatia		21 Sep 92		21 Sep 92	15 Oct 93	
Cuba		14 Jul 92		14 Jul 92		
Cyprus		28 May 92		28 May 92	11 Oct 94	
[Czechoslovakia]		1 Oct 90		1 Oct 90		
Czech Republic		30 Sep 93		30 Sep 93		
Denmark	22 Mar 85	29 Sep 88	16 Sep 87	16 Dec 88	20 Dec 91	21 Dec 93
Djibouti						
Dominica		31 Mar 93		31 Mar 93	31 Mar 93	

Country	Vienna Convention		Montreal Protocol		1990	1992
	Signed	Ratified	Signed	Ratified	Ratified	Ratified
Dominican Rep.		18 May 93		18 May 93		
Ecuador		10 Apr 90		30 Apr 90	23 Feb 93	24 Nov 93
Egypt	22 Mar 85	9 May 88	16 Sep 87	2 Aug 88	13 Jan 93	28 Jun 94
El Salvador		2 Oct 92		2 Oct 92		
Equatorial Guinea		17 Aug 88				
Eritrea						
Estonia						
Ethiopia		11 Oct 94		11 Oct 94		
Fiji		23 Oct 89		23 Oct 89	9 Dec 94	
Finland	22 Mar 85	26 Sep 86	16 Sep 87	23 Dec 88	20 Dec 91	16 Nov 93
France	22 Mar 85	4 Dec 87	16 Sep 87	28 Dec 88	12 Feb 92	3 Jan 96
Gabon		9 Feb 94		9 Feb 94		
Gambia		25 Jul 90		25 Jul 90	13 Mar 95	
Georgia		21 Mar 96		21 Mar 96		
[German Dem. Rep.]		25 Jan 89		25 Jan 89		
Germany, Fed. Rep.	22 Mar 85	30 Sep 88	16 Sep 87	16 Dec 88	27 Dec 91	28 Dec 93
Ghana		24 Jul 89	16 Sep 87	24 Jul 89	24 Jul 92	
Greece	22 Mar 85	29 Dec 88	29 Oct 87	29 Dec 88	11 May 93	30 Jan 95
Grenada		31 Mar 93		31 Mar 93	7 Dec 93	
Guatemala		11 Sep 87		7 Nov 89		
Guinea		25 Jun 92		25 Jun 92	25 Jun 92	
Guinea-Bissau						
Guyana		12 Aug 93		12 Aug 93		
Haiti						
Holy See						
Honduras		14 Oct 93		14 Oct 93		
Hungary		4 May 88		20 Apr 89	9 Nov 93	17 May 94
Iceland		29 Aug 89		29 Aug 89	16 Jun 93	15 Mar 94
India		18 Mar 91		19 Jun 92	19 Jun 92	

Country	Vienna Convention		Montreal Protocol		1990	1992
	Signed	Ratified	Signed	Ratified	Ratified	Ratified
Indonesia		26 Jun 92	21 Jul 88	26 Jun 92	26 Jun 92	
Iran (Islamic Rep. of)		3 Oct 90		3 Oct 90		
Iraq						
Ireland		15 Sep 88	15 Sep 88	16 Dec 88	20 Dec 91	16 Apr. 96
Israel		30 Jun 92	14 Jan 88	30 Jun 92	30 Jun 92	5 Apr. 95
Italy	22 Mar 85	19 Sep 88	16 Sep 87	16 Dec 88	21 Feb 92	4 Jan 95
Jamaica		31 Mar 93		31 Mar 93	31 Mar 93	
Japan		30 Sep 88	16 Sep 87	30 Sep 88	4 Sep 91	20 Dec 94
Jordan		31 May 89		31 May 89	12 Nov 93	30 Jun 95
Kazakhstan						
Kenya		9 Nov 88	16 Sep 87	9 Nov 88	27 Sep 94	27 Sep 94
Kiribati		7 Jan 93		7 Jan 93		
Korea, Dem. People's Republic of		24 Jan 95		24 Jan 95		
Korea, Republic of		27 Feb 92		27 Feb 92	10 Dec 92	2 Dec 94
Kuwait		23 Nov 92		23 Nov 92	22 Jul 94	22 Jul 94
Kyrgyz Republic						
Laos						
Latvia		28 Apr 95		28 Apr 95		
Lebanon		30 Mar 93		31 Mar 93	31 Mar 93	
Lesotho		25 Mar 94		25 Mar 94		
Liberia		15 Jan 96		15 Jan 96	15 Jan 96	15 Jan 96
Libyan Arab Jamahiriya		11 Jul 90		11 Jul 90		
Liechtenstein		8 Feb 89		8 Feb 89	24 Mar 94	
Lithuania		18 Jan 95		18 Jan 95		
Luxembourg	17 Apr 85	17 Oct 88	29 Jan 88	17 Oct 88	20 May 92	9 May 94
Macedonia, Former Yugoslav Rep. of		10 Mar 94		10 Mar 94		
Madagascar						
Malawi		9 Jan 91		9 Jan 91	8 Feb 94	28 Feb 94

Country	Vienna Convention		Montreal Protocol		1990	1992
	Signed	Ratified	Signed	Ratified	Ratified	Ratified
Malaysia		29 Aug 89		29 Aug 89	16 Jun 93	5 Aug 93
Maldives		26 Apr 88	12 Jul 88	16 May 89	31 Jul 91	
Mali		28 Oct 94		28 Oct 94	28 Oct 94	
Malta		15 Sep 88	15 Sep 88	29 Dec 88	4 Feb 94	
Marshall Islands		11 Mar 93		11 Mar 93	11 Mar 93	24 May 93
Mauritania		26 May 94		26 May 94		
Mauritius		18 Aug 92		18 Aug 92	20 Oct 92	30 Nov 93
Mexico	1 Apr 85	14 Sep 87	16 Sep 87	31 Mar 88	11 Oct 91	16 Sep 94
Micronesia, Fed- erated States of		3 Aug 94		6 Sep 95		
Moldova, Rep. of						
Monaco		12 Mar 93		12 Mar 93	12 Mar 93	
Mongolia		7 Mar 96		7 Mar 96	7 Mar 96	7 Mar 96
Morocco	7 Feb 86	28 Dec 95	7 Jan 88	28 Dec 95	28 Dec 95	28 Dec 95
Mozambique		9 Sep 94		9 Sep 94	9 Sep 94	9 Sep 94
Myanmar		24 Nov 93		24 Nov 93	24 Nov 93	
Namibia		20 Sep 93		20 Sep 93		
Nauru						
Nepal		6 Jul 94		6 Jul 94	6 Jul 94	
Netherlands	22 Mar 85	28 Sep 88	16 Sep 87	16 Dec 88	20 Dec 91	25 Apr 94
New Zealand	21 Mar 86	2 Jun 87	16 Sep 87	21 Jul 88	1 Oct 90	4 Jun 93
Nicaragua		5 Mar 93		5 Mar 93		
Niger		9 Oct 92		9 Oct 92	11 Jan 96	
Nigeria		31 Oct 88		31 Oct 88		
Norway	22 Mar 85	23 Sep 86	16 Sep 87	24 Jun 88	18 Nov 91	3 Sep 93
Oman						
Pakistan		18 Dec 92		18 Dec 92	18 Dec 92	17 Feb 95
Palau						
Panama		13 Feb 89	16 Sep 87	3 Mar 89	10 Feb 94	
Papua New Guinea		27 Oct 92		27 Oct 92		
Paraguay		3 Dec 92		3 Dec 92	3 Dec 92	



Country	Vienna Convention		Montreal Protocol		1990	1992
	Signed	Ratified	Signed	Ratified	Ratified	Ratified
Peru	22 Mar 85	7 Apr 89		31 Mar 93	31 Mar 93	
Philippines		17 Jul 91	14 Sep 88	17 Jul 91	9 Aug 93	
Poland		13 Jul 90		13 Jul 90		
Portugal		17 Oct 88	16 Sep 87	17 Oct 88	24 Nov 92	
Qatar		22 Jan 96		22 Jan 96	22 Jan 96	22 Jan 96
Romania		27 Jan 93		27 Jan 93	27 Jan 93	
Russian Fed./USSR	22 Mar 85	18 Jun 86	29 Dec 87	10 Nov 88	13 Jan 92	
Rwanda						
Saint Kitts and Nevis		10 Aug 92		10 Aug 92		
Saint Lucia		28 Jul 93		28 Jul 93		
Saint Vincent and the Grenadines						
Samoa		21 Dec 92		21 Dec 92		
San Marino						
Sao Tome and Principe						
Saudi Arabia		1 Mar 93		1 Mar 93	1 Mar 93	1 Mar 93
Senegal		19 Mar 93	16 Sep 87	6 May 93	6 May 93	
Seychelles		6 Jan 93		6 Jan 93	6 Jan 93	27 May 93
Sierra Leone						
Singapore		5 Jan 89		5 Jan 89	2 Mar 93	
Slovakia		28 May 93		28 May 93	15 Apr 94	
Slovenia		6 Jul 92		6 Jul 92	8 Dec 92	
Solomon Islands		17 Jun 93		17 Jun 93		
Somalia						
South Africa		15 Jan 90		15 Jan 90	12 May 92	
Spain		25 Jul 88	21 Jul 88	16 Dec 88	19 May 92	
Sri Lanka		15 Dec 89		15 Dec 89	16 Jun 93	
Sudan		29 Jan 93		29 Jan 93		
Suriname						
Swaziland		10 Nov 92		10 Nov 92		
Sweden	22 Mar 85	26 Nov 86	16 Sep 87	29 Jun 88	2 Aug 91	9 Aug 93

Country	Vienna Convention		Montreal Protocol		1990	1992
	Signed	Ratified	Signed	Ratified	Ratified	Ratified
Switzerland	22 Mar 85	17 Dec 87	16 Sep 87	28 Dec 88	16 Sep 92	
Syrian Arab Rep.		12 Dec 89		12 Dec 89		
Tajikistan						
[Taiwan, Province of China]	<i>complies with the Protocol</i>					
Tanzania, United Rep. of		7 Apr 93		16 Apr 93	16 Apr 93	1 Dec 95
Thailand		7 Jul 89	15 Sep 88	7 Jul 89	25 Jun 92	
Togo		25 Feb 91	16 Sep 87	25 Feb 91		
Tonga						
Trinidad and Tobago		28 Aug 89		28 Aug 89		
Tunisia		25 Sep 89		25 Sep 89	15 Jul 93	2 Feb 95
Turkey		20 Sep 91		20 Sep 91	13 Apr 95	10 Nov 95
Turkmenistan		18 Nov 93		18 Nov 93	15 Mar 94	
Tuvalu		15 Jul 93		15 Jul 93		
Uganda		24 Jun 88	15 Sep 88	15 Sep 88	20 Jan 94	
Ukraine	22 Mar 85	18 Jun 86	18 Feb 88	20 Sep 88		
United Arab Emirates		22 Dec 89		22 Dec 89		
United Kingdom	20 May 85	15 May 87	16 Sep 87	16 Dec 88	20 Dec 91	4 Jan 95
United States of America	22 Mar 85	27 Aug 86	16 Sep 87	21 Apr 88	18 Dec 91	2 Mar 94
Uruguay		27 Feb 89		8 Jan 91	16 Nov 93	
Uzbekistan		18 May 93		18 May 93		
Vanuatu		21 Nov 94		21 Nov 94	21 Nov 94	21 Nov 94
Venezuela		1 Sep 88	16 Sep 87	6 Feb 89	29 Jul 93	
Viet Nam		26 Jan 94		26 Jan 94	26 Jan 94	26 Jan 94
Yemen		21 Feb 96		21 Feb 96		
Yugoslavia		16 Apr 90		3 Jan 91		
Zaire		30 Nov 94		30 Nov 94	30 Nov 94	30 Nov 94

Country	Vienna Convention		Montreal Protocol		1990	1992
	Signed	Ratified	Signed	Ratified	Ratified	Ratified
Zambia		24 Jan 90		24 Jan 90	3 15 Apr 94	3
Zimbabwe		3 Nov 92		Nov 92	Jun 94	3 Jun 94
European Economic Community	22 Mar 85	17 Oct 88	16 Sep 87	16 Dec 88	20 Dec 91	20 Nov 95

## ANNEX C — THE INTERNET ROADMAP TO OZONE POLITICS

*For general information see:*

<http://www.unep.org/unep/secretar/ozone/home.htm> or the Home Page of the  
United States Environmental Protection Agency  
<http://www.epa.gov/docs/ozone/index.html>

*For the full text of the Vienna Convention and the Montreal Protocol see:*

<http://www.unep.org/unep/secretar/ozone/ozntreat.htm>

*For the status of ratification see:*

<http://www.unep.org/unep/secretar/ozone/ratifi.htm>

*For the Reports of the Conferences resp. Meetings of the Parties and UNEP Publications see:*

[http://www.unep.org/unep/secretar/ozone/prod\\_ser.htm](http://www.unep.org/unep/secretar/ozone/prod_ser.htm)

*For scientific information see*

<http://www.epa.gov/docs/ozone/science/science.html>

<http://www.al.noaa.gov/WWHHD/pubdocs/WMOUNEP94.html> For

the specification of ODS see

<http://assets-www.idss.ida.org> Specifically

for information on methyl bromide see

<http://www.epa.gov/docs/ozone/mbr/mbrqu.html>

*For the critique of governmental ozone policies see*

<http://www.greenpeace.org/~ozone>

*For United States Regulation see*

<http://www.epa.gov/docs/ozone/tutle6/usregs.html>

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