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The GEF and the concept of incremental cost :  
a sustainable convention ?

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Nobody can talk about development and the environment any more without reference to sustainable development. It is, as Olivier Godard (1994) points out, a concept which many hope will stimulate fresh theories and practices and produce new areas of compromise for conflicting concerns and opinions. Meanwhile, there is fierce competition between the various different conceptions of the world and the future, each striving to compel recognition for a particular ideal definition of how development should be, how it should be "sustained" and which conceptual instruments and theories should be used to assess and/or achieve it.

The institutions and institutional mechanisms being established to cater for the demands of the defining process and the move towards sustainable development also serve as forums for debate, places where the various different conceptions of the world and the future can argue their case. As Sylvie Faucheux and Jean-Francois Noël (1990), Olivier Godard (1989, 1993a, 1993b), Jean-Charles Hourcade (1994), Marc Mormont (1995) and others have shown, the mounting of a public stage for the social construction of environmental issues and decision-making, involves much more than a simple transfer of scientific knowledge into the realms of policy-making; for it is the fruit of an interplay between scientists, politicians, the media, ecological groups, industrialists and so on.

There must be consensus among these actors as to what constitutes common knowledge and common practices, as well as over the diagnoses, solutions, policy-making instruments and institutions. Their agreements become prescriptive frameworks (Mormont, 1995:19), i.e. the expression of a willingness and commitment to act in keeping with a particular vision of the world.

Olivier Godard (1989) has shown that in managing environmental problems, one always finds conflicts over legitimacy concealed beneath the issue of effective policy-making and a choice of instruments. Environmental policy instruments always have much more to them than meets the eye; they inspire "a network of affinities between certain social mechanisms, depictions of nature, types of human interest and ideas about how life in a society should be organized and coordinated" (Godard, 1993b:26). Before passing judgement on whether such instruments are any good or not, they should first - and foremost - be considered in the light of the system of legitimacy from which they stem.

We are proposing a study on the Global Environmental Facility (GEF) - the institution responsible for implementing the policy side of the Conventions on Global Environment signed at the 1992 Rio Earth Summit. We particularly focus on the following: the drawing up of an environmental convention; the social construction of environmental problems; the clash of legitimacies in the institutions over environmental policy instruments. The role of the GEF is to financially assist developing countries so that they may carry out development projects complying with the conditions for global environmental protection. At the heart of this official international policy, is the concept which gives the GEF its *raison d'être* and legitimacy to act, i.e. that of incremental cost.

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Part one of this paper looks into the origins of the GEF and its instrument, incremental cost: in other words, the constituent parts of an environmental convention. In part two, we shall see the theoretical and practical problems the incremental cost concept has come up against. This brings us back to our opening question of sustainable development: can fresh suggestions and new principles for organizing collective action emerge from confrontation and contradictions?

## 1. IN PURSUIT OF INSTITUTIONAL LEGITIMACY

The GEF came into being before the Earth Summit in November 1990 and in response to a call from the industrialized countries (especially France and Germany) for a special funding agency for global environmental protection. A suitable infrastructure was needed to settle a geopolitical and environmental question: what measures could be taken to stop Southern economic development from threatening global stability?

The GEF was going to have to pursue institutional legitimacy and prove its efficiency by adopting an economic instrument.

### 1.1. PRECEDENTS

The GEF draws on two earlier precedents: the Montreal Protocol concerning the depletion of the ozone layer, and the International Undertaking on Plant Genetic Resources concerning the protection of agricultural diversity.

#### 1.1.1. The Montreal Protocol and the Interim Multilateral Fund

On September 16th, 1987, at the end of a six-year long process, the United Nations Environment Programme (UNEP) initiated the signing of the Montreal Protocol. In view of the fact that they were not really responsible for the ozone problem, and because of their limited finances, the developing countries were given a special place at the table. They were told that if their populations were consuming no more than 0.3kg of CFC per capita per year by the day the Protocol came into force, then they would be granted a 10-year deadline within which to honour their commitment to phasing out these controlled substances. By way of assistance, the Protocol just made a vague reference to provisions of technical aid. This was to prove unsatisfactory. CFC producers China and India refused to sign without the assurance of a suitable funding mechanism to allow them to acquire new ozone-friendly technologies.

The period post Montreal was, as Alexander Wood (1993) shows, one of hard discussions to determine the shape and workings of a cooperative finance and technology fund. The outcome was the Interim Multilateral Fund, which came into being in December 1990 at the Montreal Protocol revision in London. Co-managed by the World Bank, UNEP and the United Nations Development Programme (UNDP), it was designed to cover the incremental cost arising through the application of the Montreal Protocol. This reference to additional costs was made at the behest of the developing countries, who were keen to make clear the fact that the new funding mechanism would be supplementing, not substituting, their regular official development assistance.

Managed along the lines of the United Nations system (on contributions made proportionally to GNP), the fund had but limited means at its disposal: 160 million dollars (i.e. less than 4 cents per capita in the South - as per 1988 census data) for a period of ten years, with a further 80 million to come once China and India decided to align.

The Multilateral Fund began work on January 1st, 1991. Its job was to prepare the technological conversion process for eradicating CFCs and a number of other chlorine and bromine-based substances. Initially, sights were set on national action programmes. Incremental cost was defined by referring to a suggested cost list in the appendix of the document instituting the Multilateral Fund<sup>4</sup>. It

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<sup>4</sup>According to A. Wood (1993, p. 346), it includes the costs for converting installations, for R&D, recovery and

referring to a suggested cost list in the appendix of the document instituting the Multilateral Fund<sup>4</sup>. It was estimated that the total cost of technological conversion for the whole of the developing countries would come to 6 or 7 billion dollars...

In order to avoid financing the same trials in each and every country, a new approach was adopted in 1992 : attention turned to favour a more sector-based approach. The desired outcome would be gains in efficiency and an acquiring of universally applicable know-how.

It turned out that the technology transfers would essentially be undertaken within the framework of bilateral agreements and internal company agreements, between parent companies and subsidiaries.

### 1.1.2. The International Undertaking on Plant Genetic Resources

In 1960, the Food and Agriculture Organisation (FAO) became the first international body to take an interest in genetic resources. By 1981 it had prepared an International Convention on Plant Genetic Resources and was planning to create an international gene bank. However, many countries felt uneasy about it and, in 1983, the FAO had to settle for an International Undertaking on Plant Genetic Resources defending the common heritage of humankind, the principles: (a) of free access to resources and (b) of "farmers' rights" -i.e. the acknowledgement of, and remuneration for the work of indigenous communities and peasants who had been selecting and improving plantlife for thousands of years. Farmers' rights were settled at two FAO conferences held in 1989 and 1991. The FAO has always supported the certificate system of the International Union for the Protection of New Varieties of Plants (UPOV), which acknowledges the interests of farmers by protecting the plant, and at the same time guarantees research access to its genetic resources. The FAO campaigns for a global negotiation of farmers' rights umpired by an international institution, like itself. It therefore suggests that an international commission be set up on plant genetic resources, along with an international funding provisioned with contributions from seed growers, and assisting genetic resources programmes in the developing countries.

The international commission has been meeting once every two years, but the FAO has been unable to raise the finance for its Undertaking.

## 1.2. THE EARTH SUMMIT: TEMPORARY CONSENSUS

The Earth Summit was a theatre of confrontation between differing visions of the world, the divergent interests of North and South and so on... The Convention on Biological Diversity, in particular, acted as a backdrop to (a) ideological struggles between those considering biological resources as "global commons" and the upholders of the right to patenting lifeforms, and (b) institutional wranglings between strict conservationists and the champions of sustainable use. The fact that the GEF was recognized as part of Conventions reflects temporary consensus on the terms for North-South equilibrium and, the form of conservation for genetic resources.

### 1.2.1. Determining the roles of North and South

The countries of the South refused to accept that in the name of the global environment, the North could freely indulge in its green meddling and slap restrictions on their industrialization. With debate revolving around development-related arguments, the conference became one where environment and development were indissociable, yet actively opposed. Should one be preventing the risks or sharing out the profits ?

Such was the context within which the role of the GEF would need to be defined. Should it compensate for the environmental damage caused by the industrialized world ? Should it take on the benevolent task of helping the South achieve sustainable development, or work to prevent humanity for the planet's destruction ?

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<sup>4</sup>According to A. Wood (1993, p. 346), it includes the costs for converting installations, for R&D, recovery and recycling in the production and intermediary or end consumption activities involving substances controlled under the Protocole de Montreal.

The Conventions set the measures to be taken to offer the South guaranteed financial advantages in return for a commitment to global environmental protection. Each Convention stipulated different individual roles (e.g. risk management). The one on climatic change focused on ecological risks and stressed the details for the transfer of clean technologies. It acknowledged that the industrialized world is historically to blame for the amount of greenhouse gasses accumulated in the atmosphere. So, although they were relatively blameless, the developing countries faced having to shoulder a share of the extra costs required to protect an endangered global environment. In view of this, the GEF opted for the "polluter-pays principle", whereby industrialized countries must foot the bill for additional costs for global environmental protection incurred in the South.

The Convention concerning biodiversity took a somewhat different approach. The matter of how to contain the depletion of planetary biodiversity through conservation and sustainable use became a secondary one: the main objective here being the "fair and equitable sharing of the benefits arising out of the utilization of genetic resources, including by appropriate access to genetic resources and by appropriate transfer of relevant technologies, taking into account all rights over those resources and to technologies, and by appropriate funding" (art.1). Biodiversity seems narrowed down to genetic resources and potential profit-making on the marketplace. The pharmaceutical industry's utilization of tropical forest plantlife, for instance, is estimated to be worth hundreds of billions of dollars<sup>5</sup>.

The Convention upheld the sovereignty of each individual country over its own resources and hence, allowed for bilateral agreements. So we have a situation whereby the North needs to persuade the South not to use its rights, as laid down in the Convention. It may be in the best interests of South countries - if left with no other choice, that is - to destroy their environment for the sake of development. They are so far behind in growth terms, that the entire planet would face a tremendous danger were they to try and catch up using the same technological means as in the North. A cross between "the biggest ecological disaster would be if every Chinese person went and bought a motor scooter" and George Bush's "our standards of living are non-negotiable" (Lipietz, 1992:109). The industrialized world is supposed to have already internalized the extra environmental costs through tax systems and adequate subsidies, and to have the necessary means and awareness to put sustainable development into practice; however, the perception the South has of environmental problems and its tax systems do not permit implementation of an effective global environmental protection policy at a local level. So the GEF can feel fully justified in instilling a logic of prevention, a precautionary principle that now looks more like the "victim-pays" rather than the "polluter-pays principle". The countries that see themselves, in their name or in that of humankind, wronged by the loss of biodiversity help those bearing the financial brunt of conservation.

GEF literature contains many ambiguities that contribute to this stage-managing of the conflicts of interest. For instance, every possible form of phrasing is employed to avoid uttering the term compensation - a nonetheless common one in economics. Incremental cost cannot be made to seem as though it were compensation (of the kind given to make up for something has, or has not, done), for it might open the way for reclamations at international conferences.

### 1.2.2. Biodiversity caught in the crossfire

While the FAO was trying to create a referee institution to defend biological resources as the heritage of humankind, UNEP, which had already been given the job of drawing up the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), was preparing the Convention on Biological Diversity along the lines of the biodiversity management strategy promoted by major conservationist bodies like the International Union for the Conservation of Nature (IUCN), and the World Resource Institute (WRI). Conservationist bodies like the IUCN had been working on the theme of the sustainable use of biodiversity since 1980. At the time, though, the thinking was reserved to the wild species utilized by humans (the rhinoceros, whale ...), and not to the domesticated ones (cultivated plants and livestock animals). They were very slow to wake up to the fact that there is rarely any point protecting a species without protecting its ecosystem into the bargain. Although at first concerned with ecosystems and species, the Convention's drafters turned their attention to genetic resources, assuming them to represent a source of instant income for the developing countries;

<sup>5</sup> For more on these estimates and on the benefits of prospecting contracts for saving tropical forests, see the critical articles by Mendelsohn and Balick, 1995 and Pistorius et al and van Wijk, 1993.

and in so doing, took an opposite stance to policy at the FAO. UNEP fights for the principle of national sovereignty over biological (including genetic) resources, and believes that a system of bilateral agreements, modelled on the much-vaunted Merck-INBio agreement, is better to defend South country rights. So free access to the resources is reconsidered in order to encourage individual countries to develop their contractual relations. The idea of global commons gives way to confirmation of a nation's sovereignty over its resources, apparently counteracting a defence of global biodiversity.

For anybody tackling the preservation and diversity of living species, the dividing line between wild and domesticated species, or between "natural" and agro-ecosystems, is becoming more and more obscure. Clearly then, the Convention on Biological Diversity marked a rapprochement of the conservationists and users of genetic resources, taking in the whole of the living world "excepting humanity, yet including micro-organisms" (Chauvet, 1993). They rallied chiefly to the theme of the sustainable use of wild and semi-domesticated species and the two unifying concepts of biodiversity and sustainable development. The Convention was the first international agreement to offer an integrated approach to preservation and the sustainable utilization of global biological resources. It covered themes as varied as: conservation in and ex situ, wild and domesticated species, sustainable resource usage, genetic resources and biotechnologies, accessible technologies, biosecurity and genetically modified organisms, financing and so on.

Then GATT entered the debate, pressing its case for protecting intellectual property rights, and requesting that the Convention on Biological Diversity refrain from going against legislation regarding the patents filed by the biotechnologies industry. UPOV had taken the initiative in 1991, when it revised its Convention on the Protection of Cultivars in an attempt to prevent the patenting system from being extended to the plants resources.

### 1.3. THE GEF BECOMES A MECHANISM OF CONVENTIONS

The new multilateral fund, the GEF, starts out resembling a pilot programme (1991-1993) supervised by the World Bank, the UNDP and UNEP. Having come into being some time prior to the Earth Summit, it achieves its environmental, political and juridical legitimacy at the signing of the Rio Conventions. The Conventions on Biological Diversity and Climatic Change introduce the GEF as the institutional mechanism, on an interim basis, for the provision of new and additional resources to enable developing countries Parties to meet the agreed full incremental costs related to the implementation of the Conventions. Not to be confused with official development assistance, GEF funding is given in the form of a donation for carrying out projects in keeping with Convention requirements and contributing to global environmental protection.

The GEF is endowed with a 1,3 billion dollar budget. Its contributions system looks quite different to that of the Interim Multilateral Fund: the only existing rule determining the size of a country's contributions is a lower limit. Another infamous difference is that only donor countries may attend GEF meetings.

The GEF crystallizes the cacophony of conflicts orchestrated at the Earth Summit conflicts. In the light of North-South confrontation, the GEF has to make concessions with regard to its decision-making system, distance itself from the World Bank and set itself up as the most neutral mechanism possible; one whose actions are chiefly led according to an economic instrument: incremental cost.

In theory, the GEF is quite separate from the World Bank, with independent management and operating rules. Yet the World Bank is where the GEF's secretarial offices are housed, and the Bank acts like an administrator. It has been responsible for the launch of over 60 percent of the GEF's projects. GEF work is dominated by economists and engineers, a characteristic feature of World Bank interventions. Its economists (Pearce, Barrett, King) rarely take a different, more sociological or ecological, view of environmental questions than might be found at UNEP or the UNDP.

This irrefutable fact has been responsible for some of the GEF's difficulties. The fund and its methods of intervention were already prepared ahead of the Convention drafts, and the financial

backers involved at the start are naturally keen to keep a grip on the reins. Under the supervision of the World Bank, though, a backer's say in decision-making depends on the size of the contributions. The South demands that the GEF be run along the lines of the United Nations (one country, one vote). A sort of compromise is reached with the adoption of the "double majority" rule, requiring a 60 percent majority of all member states plus the approval of the donors providing at least 60 percent of the contributions, and thereby giving both developed and developing countries alike the right to veto (El Ashry, 1994).

Fine textual analysis of the Conventions both on climatic change and the protection of biological diversity, shows growing mistrust with regard to the GEF<sup>6</sup>. The Convention on Climatic Change made it compulsory to choose an existing institution, while the Convention on Biological Diversity even provides for the possibility of lawful appeals to a new institution. At the close of the Earth Summit, the GEF is still but an interim agency.

#### 1.4. AFTER RIO : THE MACHINE SPINS OUT OF CONTROL

The Convention on Biological Diversity still remains to be fully implemented. The FAO seems to have faded somewhat; although it did nevertheless manage to keep pre-1992 collections of ex situ genetic resources out of the Convention's reach. It has since won the backing of the Consultative Group on International Agricultural Research (CGIAR), a key actor in genetic research and intensive agriculture. The CGIAR had felt so ill at ease at the prospect of how the Convention was going to apply its principle of national sovereignty, that they exercised their private law rights and placed their hitherto freely accessible collections under the protection of the FAO. The Commission on Plant Genetic Resources has been working since 1994 on a project to revise the 1983 International Commitment and turn it into a Convention protocol. The FAO is also applying its negotiating power to the matter of forests. They handle the management of the Intergovernmental Panel on Forests, a body set up at the close of the Earth Summit by the Commission on Sustainable Development. To add to that, the FAO is preparing an Undertaking on animal genetic resources. Economic stakes are common to all discussions between the institutions. The most favourable institutional environments for agricultural genetic resources are still to be found at the FAO and the CGIAR. Meanwhile, as can be seen in Global Biodiversity Assessment (a UNEP reference book published in 1995), the UICN, WRI, World Wildlife Fund (WWF) and UNEP retain their pronounced conservationist leanings.

Further Conventions have been put together. Acting in the name of the World Heritage Convention, UNESCO is dealing with the protection of biodiversity within human-nature relationships on the "cultural landscape". The Convention to Combat Desertification, signed in October 1994 in Paris, also tackles deforestation. And concern for forest protection figes in the Convention on Climatic Change, too. Various meetings held at the initiative of governments (Indonesia, Malaysia, Canada ...) or NGOs have been seeking to establish the criteria for the sustainable forest use. The NGOs both large and small have been producing an increasing number of forums and preliminary documents.

National initiatives have not been left on the shelf. France, in accordance with Convention stipulations<sup>7</sup>, set up its Fonds français pour l'environnement mondial (FFEM) in 1994 so as to make up French contributions to the GEF (800 million francs over three years) with a substantial bilateral aid package (400 million francs over three years). The FFEM's objective was to distinguish its projects from those of the GEF which at least started out confined to specific protection programmes (parks, reserves...). The French could therefore assist their usual partners and make use of their cooperation structures. They adopted the incremental cost concept, as well as the GEF structure of science and steering Committees.

<sup>6</sup> Richard Mott (1993:308) puts it like this: " With respect to timing of the required reforms, the biodiversity language arguably is stronger: it authorizes the GEF to assume its interim role only if it has been restructured along lines specified in Article 21. The climate treaty states simply that in connection with its interim role, the GEF should be restructured to allow it to fulfill the requirements of the treaty. "

<sup>7</sup> From article 20 of the Convention on Biological Diversity: "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."

In 1994, GATT, or rather the World Trade Organization, finalized the trade related intellectual property section (TRIPs). These agreements draw little distinction between modern technical-scientific know-how and the traditional knowledge of indigenous communities and peasants. Their main aim is to protect property from outside use. Having said that, they leave open the possibility of protecting plants and species by means of either patenting, special protection orders or a combination of the two.

A frantic succession of international negotiations are being held to bring a little coherence to all these multifarious initiatives. 1996 is set to be a watershed year for the genetic resources relying on progress in the patenting laws, the standing of indigenous communities, endorsement of the Convention on Biological Diversity, revision of the agreements on cultivars ... A whole flurry of meetings is set to take place on the international stage. There is the Rome NGO meeting in April to discuss an appropriate strategy for defending farmers' and indigenous peoples' rights over traditional knowledge and genetic resources. It will prepare groundwork for the fourth FAO technical conference in Leipzig in June, where discussions will centre on a global plan of action, the extending of farmers' rights, access to ex situ collections exonerated from the Convention. In September, there is a summit conference on food in Rome. The third Conference of the Parties will open in Buenos Aires in November. In 1997, an assessment and revision of TRIPs is set to go ahead under the baton of the World Trade Organization.

The GEF is currently in its operational phase (1994-1997). Although acknowledged as the mechanism of Conventions, it is having to tolerate criticisms largely of the effectiveness of its action. Incremental cost, which ought to have made its name as the GEF's benchmark economic instrument, is having trouble securing its economic legitimacy.

## 2. IN PURSUIT OF ECONOMIC LEGITIMACY

The GEF's economic legitimacy has been sought via the incremental cost concept. Incremental cost and the GEF are indissociable: the GEF is an "incremental" international body, new and quite distinct from the agencies offering official development assistance and local environmental protection; its principle of incremental cost precludes the financing of development aid or local environmental protection measures.

Although they make no direct reference to a theoretical system for gaining legitimacy or organizing the transfer of funds (barring the stipulation that payments should be "predictable, adequate and on time"), the Conventions signed at Rio do make a veiled one to the incremental cost concept<sup>8</sup>. These Conventions may be taken as sets of regulations stemming from a logic of command and control, while incremental cost is more of a market-based instrument.

### 2.1. INCREMENTAL COST : DRAWING ON THE COASIAN UNIVERSE

Building on the experience of the Multilateral Fund, GEF strategy is to intervene at the level of development projects. Here is where the incremental cost concept finds its roots and its field of application. It stems from the evaluation literature and cost-benefit analysis of the 1960s, and designates the cost differences arising when two alternatives are implemented within a single project<sup>9</sup>.

Incremental cost is based on the idea that development projects need to include a financial "plus" for the good of global environmental protection. This seemingly sensible idea confirms the distinction, if not opposition, between economic development and global environmental protection. The

<sup>8</sup>From article 20 of the Convention on Biological Diversity: "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".

<sup>9</sup>Earl Burch and William Henry (1974:120): "Incremental cost is the change in total cost associated with a change in business activity. The change could be level of output, product mix, quality of product, production technology, working conditions, use of resources, or any other business activity (...) The incremental cost concept is interesting only when it aids in comparison of decision alternatives."

incremental cost concept assumes that a monetary incentive is required (and is sufficient) to change an environmentally damaging pattern of behaviour. So it appears to conform to the economists' traditional view of the environment question, i.e. by internalizing externalities.

### 2.1.1. A framework for negotiation

Such a process of internalization can be found in a singular parallel universe: that of Coasian problematics. Partially based on an acknowledgement of the reciprocal nature of externalities, the Coasian approach provides a means of attesting to the existence of a perfectly decentralized solution by direct negotiation between the parties involved. This negotiation is meant to fix the amounts of incentives to be paid (or received) in exchange for a reduction in the given damage. These may also be taken to represent the terms in trading "property rights" over a given resource or the right to use it according to the type of externality involved. R. Coase (1960:155) defines such property rights as the "rights to undertake certain (physical) actions" in the knowledge that the effects of some such authorized actions may ultimately be harmful to others. And this bargaining solution of externalities may also be described as market exchange over property rights. The initial distribution of property rights is governed by the prevailing environmental law which orders compensation for damages. It could be said that initially, polluters are actually given the right to pollute when not constrained to pay compensation for damages. On the other side of the coin, the "victims" may be considered as being entitled to the right not to have to suffer a given form of pollution.

A reference to the Coase theorem seems to show through in the way the GEF perceives the incremental cost concept. It sees it as a frame of reference for the negotiation which, according to Pearce and Barrett (1993:4), sets out to determine the amount of "compensation" the host country should be paid for the additional costs arising from a development project that takes the global environment into account. So the GEF emerges as an intermediary institution allowing such a negotiation to open. This negotiation is supposed to take place between the representatives of two categories of actors of opposing interests meeting in the presence of the GEF: donor countries and host countries. In exchange for the transfer of an agreed amount of money, donor countries will improve their position, while host country satisfaction remains unchanged. From the standpoint of the two countries involved, such negotiation provides a means of reaching a pareto optimal situation.

A perfectly decentralized solution of externalities can only hold true on the strict condition that two major preconditions have been met: the presence of perfectly defined property rights and the absence of transaction costs.

### 2.1.2. The allocation of property rights

From the Coasian point of view, the question of whether an externality exists becomes a matter of an optimal allocation of property rights covering resources and how they are used. The Coase theorem has allowed the efficiency properties of a perfectly competitive market to be extended to property rights. Now, property rights have to have been clearly defined and properly allocated to allow bargaining to occur. Although Coase does not mention this point, such property rights should also be exclusive and transferable, characteristics that only one particular structure of rights can be sure to provide: i.e. that of private ownership.

The monetary transfer to the host country negotiated through the GEF can be interpreted as the compensation necessary for that country's relinquishment of the uses, from among those allowed through having property rights over natural resources that are likely to pose a threat for the global environment. The Rio Conventions, as well as the GEF's incremental-cost-based policy, help to determine and allocate global environmental property rights. Article 3 of the Convention on Biological Diversity stipulates that "States have, in accordance with the Charter of the United Nations and the principles of international law, the sovereign right to exploit their own resources pursuant to their own environmental policies, and the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States or of areas beyond the limits of national jurisdiction".

So the GEF approach appears to be in keeping with Coase's and furthermore, that of the Property Rights theorists. Global environmental problems are seen as the result of an institutional failure. In other words, they are caused by a failure in the structure of rights applied to resources previously



treated as common property, if not as freely accessible. Pearce and Barrett (1993:3) stress the fact that the intervention of the GEF constitutes the main form of global appropriation failure correction in the biodiversity context.

### 2.1.3. Minimizing the transaction costs

There is another assumption that needs checking when a bargaining solution of externality is being envisaged. In the negotiations meant to take place under the auspices of the GEF to settle the terms of trade in property rights, positive progress can be made only if the transaction costs incurred are not too dissuasive. The transaction cost concept corresponds to the idea that the pricing system is a costly allocative mechanism<sup>10</sup>. Although hardly stabilized, the transaction cost concept does, more often than not, indicate the time and effort required to bring contract negotiations to fruition: the information costs, the costs incurred in forming a bargaining strategy and the finance released for a watchdog for a proper application of the final agreement. The specific nature of global environmental problems, above all the wasting away of biodiversity, jeopardizes the ascertaining of this second precondition.

If we avoid narrowing the Coasian approach down to the lessons of the Coase theorem and look at the implications of high transaction costs, market transaction can no longer be seen as the most efficient way of coordinating economic activities. There are other alternative allocative mechanisms (institutions, organizations...) that can minimize transaction costs and are eligible candidates for reallocating property rights. With this Coasian comparative perspective in mind, the creation of the GEF may be interpreted as an institutional arrangement for minimizing transaction costs.

## 2.2. WHY INCREMENTAL COST IS DIFFICULT TO APPLY ?

The incremental cost concept is based on a social construction which does not seem to suit the environmental problematics under consideration. For one thing, it appears to contradict a certain number of facts that quite specifically belong to global environmental problems. And when the job of applying the concept to biodiversity is at hand, matters on the ground and within the projects become obscured in a prevailing vagueness.

### 2.2.1. A weak social construction of environmental problems

In the Coasian universe, the environmental damage in question is simple, local, well-identified, technically controllable, easy to evaluate in monetary terms. It can be perceived directly by a limited number of agents who, being on the spot, are well-acquainted with the various parties involved and equipped with up-to-the-minute information on the nature of their problem, their property rights and their most likely manner of reasoning and economic behaviour. Such problematics and related outcomes stem from what Olivier Godard (1993b) calls a stabilized universe.

In actual fact, there is a striking lack of uniformity between these agents in terms of their respective powers, rationality and legitimacy. An appeal for financial backing from the GEF can be made by a government, an international agency, an ONG or a private business; and projects must be ratified by host countries. Of these various different actors, the States are the only ones in a position to fulfil international undertakings made in the name of the nation. Even though the incremental cost concept may be directly understood by economic actors familiar with the principles of cost efficiency, there is lingering doubt with regard to the degree of control the States may have over the (especially industrial) processes and activities at the source of global environmental problems.

The global environmental Conventions recognize States as the prime holders of property rights.

<sup>10</sup> R. Coase (1960:114) said that: "In order to carry a market transaction, it is necessary to discover who it is that one wishes to deal with, to inform people that one wishes to deal and on what terms, to conduct negotiations leading up to a bargain, to draw up the contract, to undertake the inspection needed to make sure that the terms of the contract are being observed, and so on ... These operations are extremely costly, sufficiently costly at any rate to prevent many transactions that would be carried out in a world in which the pricing system worked without cost."

This gives them such a powerful role that one cannot help but wonder about the interests they are meant to be defending. Their own as an institution? Those of the people they represent? Or those of a broader community (of assembled nations, future generations, the common heritage of humankind) for whom they would be acting as nothing more than an executive representative? Similar doubts exist over "public property" rights, for the structure here divides into two: while the State is the identified legal owner of these rights, they are actually exercised by others (private sector businesses, for example). This hybrid structure may subsequently become something close to either a private property, common property, or even open access. In the latter two cases, the necessary conditions theoretically required for a bargaining solution to exist - i.e. exclusive and transferable rights - are left unfulfilled.

Global environmental problems emerge within an unsettled universe. They cover a very broad spectrum of interests, including those of the "absent third parties" not directly involved in the negotiations: i.e. people in other countries, future generations and the natural species themselves. There is uncertainty and controversy at every level: the detection and measurement of damage, the identity and responsibility of the actors involved, the (scientific and other) information and, the available techniques for responding to the problems posed. What is more, most of the actors involved (today's generation) do not perceive the damage directly for themselves. The social and political construction is largely swathed in scientific expertise, mainly put out by the media. Another important characteristic feature of these issues absent from the Coasian reference model, is the fact that this is a long (even very long) term basically irreversible process (an extinct species is gone forever).

Under the circumstances, we would be deluding ourselves to believe we can continue relying on the usual decision-making procedures - of individual rationality and cost-benefit analysis - and take action along the purely Coasian bargaining model.

### 2.2.2. Little room to manoeuvre

Looking at the GEF and FFEM projects, it is hard to grasp how they have decided to determine incremental cost. It may well figure as a part of the financing that is devoted above all else to environment-related action, granted: but there is no real evaluation of the advantages for the global environment.

The prevailing constraints seem to be more institutional than economic. The discrepancy between the theory of incremental cost and how it works in practice is down to the constraints of having to present a portfolio, having to satisfy an incremental organism and bend to its application rules and regulations.

#### The portfolio constraint

If, for example, one were to take a close look at FFEM projects portfolio, selection procedures would appear to be governed more by the principle of harmonizing projects than of applying incremental cost. A good portfolio will therefore be one that observes:

- balance between fields (biodiversity, greenhouse effect, international waters) and, within each, balance per type of intervention or ecosystem (in or ex situ conservation, forests, coastal ecosystems, humid regions);
- balance between the interests of the various backers<sup>11</sup>, all of whom have support for their own projects at heart;
- geopolitical balance: the French Ministry of Cooperation suggests that projects should grant preferential treatment to Africa (75 percent of all 1995 projects);
- a contribution threshold: the FFEM should not be called upon to finance over 50 percent of a given project;
- divisions between fields of intervention: some areas are the responsibility of certain administrative departments. Consequently, projects on plants such as rice being the work of the

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<sup>11</sup>The FFEM comprises representatives from five government departments: the Treasury, the Foreign Office, the Ministry of Cooperation, the Department of the Environment, the Ministry of Research; as well as members of the Caisse Francaise de Developpement.

agriculture section, they cannot be considered as relating to the environment;

- types of action: it seems hard for the various backers to finance environmental protection campaigns that largely depend on providing training, prevention, legal assistance, coordination, marketing support, etc. They want their funds to go towards equipment and other material goods, not to anything "immaterial".

#### The limiting influence of an incremental organism

Since the projects have to comply with a strict economic code, the added burden of incremental costs acts as a barrier to the implementation of the most suitable ones for sustainable environmental protection. Project implementation here involves a notion of profitability, which narrows things down to a short term perspective. So the supplementary costs settled by the funding agency will not correspond to the costs run up by actions lasting as long as five years. Recurrent operating costs, compensation for opportunity costs and so on, cannot go on being paid for ad infinitum.

The profitability factor, a cost-benefit analysis criterium, assumes that a monetary evaluation can be made of both environmental damage and the advantages relating to global environmental protection. Because tourists travelling to sensitive sites are seen to want to pay towards the conservation of biodiversity, a large share of the projects tendered are now beginning to attach increasing importance to ecotourism, thereby proving their global nature and potential economic durability. Yet there does not seem to have been much thought devoted to the risks which touristic activities can thrust upon a fragile environment. Similarly, they have probably overestimated the appeal such projects may have in the eyes of the local community.

The funding agency sees its mission as tying in with the desire to reconcile the global environment with development. However, since official development and global environmental assistance must be regarded as separate issues, the wedge is in actual fact driven all the deeper

Incremental costs are theoretically meant to be easily differentiated from regular development project costs, but in practice it is often hard to say which parts of a development project concern global environment; e.g. to show that a locally defined ecosystem or species belongs to the global environment.

This troublesome task of identifying a project's incremental portion leads to something of a paradox. The projects that have the least difficulty calculating incremental costs are the ones that, after starting out with nothing remotely to do with the idea of sustainable development - and devised without a thought for the environment -, have only later had an environmental section appended. Meanwhile the very best projects spawned in the spirit of a sustainable development programme are the ones that have the greatest difficulty identifying incremental costs. Hence a good number of the projects tendered turn out to be offering a simple "greenification" of already existing development projects. Hilary French (1994:251), for example, cites a case where small GEF biodiversity protection loans have gone towards encouraging the realization of large destructive forest projects.

This twist is the doing of the internalization principles forming the bedrock of the incremental cost concept. Indeed, when internalizing the costs is the chosen path, one immediately finds oneself thinking in terms of making repairs rather than in terms of prevention.

## CONCLUSION

The early history of the GEF needs to be read on two levels : the theoretical and the institutional. Theoretically, the incremental cost concept does not appear to adapt too well to the problems posed. It does not provide the most conclusive evidence in support of a case for economic legitimacy. The GEF's institutional construction happened so fast that it was over and done with before any alternative criteria had had time to emerge. Although its instigators acknowledge the concept's limitations, the fact remains that it is nonetheless one of the constituent parts of what Olivier Godard (1993c:26) calls an "international regime" for coordinated action. What he is talking about is the whole range of "values, principles and rules, both explicit and implicit, to which a body of actors will jointly refer in their efforts to maintain stable relations". This means that the incremental cost concept has now joined

other concepts like "sustainable development" and "precautionary principles" in the institutional lexicon of "collective rhetoric". It is an axis around which negotiations may revolve. It prompts host countries, developers and backers alike to supply a clearer picture of the positive global environmental impact their projects might have. These projects are presented to a preliminary body as a finance package, then they are reviewed and reworked so as to highlight a concern for the environment in order to justify an intervention on the part of the GEF. Incremental costs ultimately boil down to however much the GEF is willing to pay. So incremental cost really does emerge as a framework for the negotiation that follows a project's selection. By insituting the GEF and the concept of incremental cost, a coalition of (political, economic, industrial ...) interests allowed a "convention" to be drawn up.

Because it is imperfect, the incremental cost concept can allow this international regime to emerge, no matter how improbable it has been made to look with such an overly wide diversity of interests, norms, value systems and systems of legitimacy. Agreement happens to be easier to arrive at when on the matter of the means than on that of the ends.

Anyway, in the light of the singular problems presented by biodiversity protection, where the scientific uncertainties are stronger than anywhere else, one may well wonder about this environmental convention : having remained relatively stable since the Montreal Protocol, is it going to last?

However, the GEF and incremental cost underscore a certain conception of the environment. By means of an intervention policy based on economic development projects, the GEF has chosen to act as an empirical development corrector rather than as a mobilizing force for potentially more appropriate actions in global environmental protection. The environment remains an added extra, something quite distinct from development. One might have expected some thought to have been devoted to the contradiction between pursuing developmental objectives and growth while at the same time trying to protect the environment. The choice of incremental cost as the means to gaining legitimacy as an efficient actor reflects the GEF's inability to develop new methodological tools for environmental appraisal.

Finally, the GEF's 1994-1997 budget of 2 billion dollars may seem like chickenfeed next to the 47 billion net flow of official development assistance distributed in 1995. Not to mention the 167 billion dollar net - and, one might safely say, ecological-concern-free- private capital flows channelled South (45 of which to China) the same year (World Bank 1996:3,23). But that is nothing compared to how it looks in the light of cost estimates issued by the Secretariat of the United Nations Conference for the Environment and Development, where the cost of implementing Agenda 21 stands at 561.5 billion dollars a year, two thirds of which to be covered from member nations' own pockets, with 142 billion left to be paid by outside aid sources.

## References

- Aubertin C. *et alii*. (1996) "Coût incrémental et protection de la biodiversité". Étude à la demande du Fonds français pour l'environnement mondial et du Ministère de l'environnement. Deux rapports : 31 p. et 145 p. + annexes.
- Burch E.E., Henry W.R. (1974) "Opportunity and Incremental Cost : attempt to define in systems terms", *The Accounting Review*, 49, (1) : 118-123.
- Caron A. (1994) "Ronald Coase et le Nirvana", Communication à la Sixth International Conference on Socio-Economics, july, 15-17, Jouy-en-Josas.
- Chauvet M. (1993) Convention biodiversité : Rio,... et après ? *Courrier de la Planète* n°19, p. 33-35.
- Coase R. (1960) The problem of social coast *The journal of Law and Economics*, 3:1-44.
- Coase R. (1988) *The Firm, the Market and the Law*, Chicago, The University of Chicago Press.
- Dessus B., Cornut P. (1994) "La notion de coût incrémental dans le cadre de la Convention Climat et du Fonds pour l'Environnement Mondial", 9 juin, CNRS, Programme Ecotech.
- El-Ashry M. (1994) Le nouveau Fonds pour l'environnement mondial. *Finances & Développement* juin 1994, p. 48.
- Faucheux S., Noël J.-F. (1990) *Les menaces globales sur l'environnement*, Paris, La Découverte.
- Godard O. (1989) "Jeux de nature : quand le débat sur l'efficacité des politiques publiques contient la question de leur légitimité", in N. Mathieu et M. Jollivet (éd.) *Du rural à l'environnement - la question de la nature aujourd'hui*, Paris, ARF Ed./L'Harmattan, pp. 303-342.
- Godard O. (1993a) "Quel régime international pour les émissions de gaz à effet de serre ?", *Natures, Sciences, Sociétés*, 1, (1) : 25-33.
- Godard O. (1993b) "Stratégies industrielles et conventions d'environnement : de l'univers stabilisé aux univers controversés", in *Environnement, économie*, Paris, INSEE Méthodes, n°39-40, pp. 145-174.
- Godard O. (1994) "Le développement durable : paysage intellectuel", *Natures, Sciences, Sociétés*, 2, (4) : 309-322.
- French H. (1994) Reconstruire la Banque mondiale *L'état de la Planète - 1994*, La Découverte, p. 229-258.
- Hourcade J.-C. (1994) "Analyse économique et gestion des risques climatiques", *Natures, Sciences, Sociétés*, 2, (3) : 202-211.
- Lipietz A. (1992) *Berlin, Bagdad, Rio* Paris, Quai Voltaire, 158 p.
- Mendelsohn R., Balick M. J. (1995) The value of undiscovered pharmaceuticals in tropical forests *Economic Botany* 49(2):223-228.
- Mormont M. (en coll. avec C. Dasnoy) (1995) "Expertise scientifique et action publique : le cas du changement climatique dans trois pays européens", *Natures - Sciences - Sociétés*, 3, (1):16-25.
- Mott R. (1993) "The GEF and the Conventions on Climate Change and Biological Biodiversity", *International Environmental Affairs*, 5, (4), 299-312.
- Pearce D., Barrett S. (1993) "Incremental cost and biodiversity conservation", paper presented at the special workshop for GEF Participants, september 21, Washington D.C.
- Pistorius R., Wijk J. van (1993) Prospection de la biodiversité : Ressources génétiques à exporter *Le Moniteur de la biotechnologie et du développement* n° 15, juin 1993. p. 12-15.
- UNEP (1995) "Economic values of biodiversity", in *Global Biodiversity Assessment*, Section 8, 234 p.
- Vivien F.-D., Antona M. (1995) Éléments de théorie économique du "coût incrémental" dans le cadre de la protection de la diversité biologique. Documents du groupe de travail "Coût incrémental et protection de la biodiversité", ORSTOM, Paris, 17 p. multigr.
- Wells M.P. (1994) "The Global Environmental Facility and Prospects for Biodiversity Conservation", *International Environmental Affairs*, 6, (1), 69-93.
- Wood A. (1993) "The Multilateral Fund for the implementation of the Montreal Protocol", *International Environmental Affairs*, 5, (4) : 335-354.
- World Bank (1996) *World debt tables/External finance for developing countries*. vol. 1. Washington DC. 252 p.

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# TOME II



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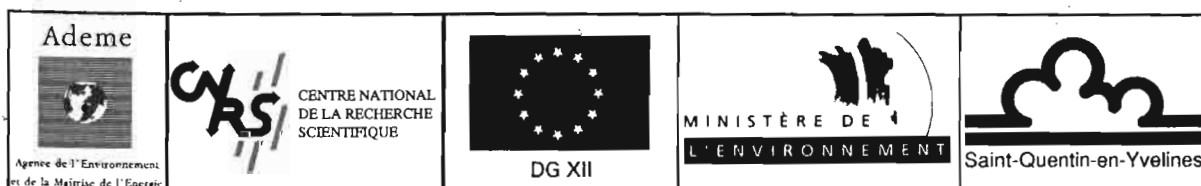
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