

GLOBAL
ENVIRONMENT
FACILITY

INCREMENTAL COSTS AND
FINANCING POLICY ISSUES

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I. INTRODUCTION

1. Most countries have committed themselves to sustainable development, and *Agenda 21* reflects a global consensus and political commitment to this at the highest level. The successful implementation of this agenda is first and foremost the responsibility of governments.
2. Action to achieve sustainable development at the national level, although clearly necessary and directly in the country's own interests, is insufficient to maintain sustainability at a global level because many activities have transboundary effects. Additional national action beyond what is required for national development is therefore also needed. Such additional action imposes additional (or "incremental") costs on countries beyond the costs that are strictly necessary for achieving their own development goals, but nevertheless generates additional benefits that the world as a whole can share.
3. A simple example of such action is the use of advanced solar energy technology in a situation where a less costly coal-fired power generator with particulate and sulfur dioxide pollution control would have been sufficient to generate the electrical power needed for development, while meeting national environmental standards. This action, the choice of solar over coal, imposes an incremental cost and avoids emitting the greenhouse gas that would otherwise be emitted. Yet it still meets the same national development goal (power) while also protecting the national population from particulates and sulfur dioxide (since these would not be emitted at all). In such a case, the incremental cost can be associated with the global environmental benefit of greenhouse gas reduction.
4. The Global Environment Facility (GEF) is one source of funding among many others. Its purpose, set out in the *Instrument*, is to provide new and additional resources for the "agreed incremental costs of measures to achieve agreed global environmental benefits" in four specified focal areas. *Agenda 21* (Section 33.16) also recognizes this specific purpose. Furthermore, both the United Nations Framework Convention on Climate Change (FCCC) and the Convention on Biological Diversity (CBD) name GEF as the interim operating entity of their financial mechanisms, and these conventions specify that new and additional resources be used to finance the "agreed full incremental costs" of the relevant measures to meet the objectives of the conventions. Although the conventions do not use the phrase "global environmental benefit," the achievement of any of their global environmental objectives is such a benefit and there is no inconsistency between the two formulations.
5. Financing the incremental costs on a grant basis from new and additional sources, such as the GEF, ensures two desirable objectives. First, these scarce funds will be dedicated to achieving global environmental benefits rather than to achieving development and local environmental benefits, for which other sources of funds are appropriate. Second, and equally importantly, eligible countries need not divert scarce development finance to achieve purely global objectives nor give up their national development goals to do so.

II. AGREED FULL INCREMENTAL COST

6. Operational staff need to judge the level of GEF funding for each proposed project pragmatically, yet not arbitrarily. They can avoid arbitrariness and provide transparency by using a principle, yet remain pragmatic by applying this principle case by case. The principle used by GEF is incremental cost, described in broad terms below and in more detail in technical reports. This principle both structures the technical negotiations necessary to reach agreement in each case and provides a reference value for the required grant financing.

7. Staff may also need these reference values for other purposes. First, among alternative measures meeting the same or very similar global environmental objectives, the measure with the lowest incremental cost (that is, the most cost-effective measure) is preferred. In general, incremental cost is an important -- but by no means the only¹ -- consideration in project selection. Second, aggregate incremental costs will give a broad indication of the funds that will need to be mobilized to achieve overall environmental goals.

8. The following is the framework for estimating incremental costs. The implications of each of the words in the critical phrase "agreed full incremental cost" is described.

Incremental

9. The relevant costs are *incremental* rather than total. The GEF eligible activity should be compared to that of the activity it replaces or makes redundant. The difference between the two costs -- the expenditure on the GEF supported activity and the cost saving on the replaced or redundant activity -- is the incremental cost. It is a measure of the economic burden on the country that results from its choosing the GEF supported activity in preference to one that would have been sufficient in the national interest.

Baselines

10. To estimate incremental cost, the analyst therefore must estimate both the expenditure on the activity in question and the cost saving on activities which, as a result of the GEF activity, will no longer be needed. Expenditure estimates are usually readily available for any fully prepared project, but cost savings present a more difficult operational problem. Cost savings pertain to the "baseline" situation of sustainable national development that does not explicitly take global considerations into account. This baseline need not be very elaborate for simple projects, and in some cases it is clear that the baseline involves no action at all. For example, without global considerations, no country needs to prepare a greenhouse gas inventory, so the baseline is simply "no inventory activity" and the incremental cost of the inventory is actually the total cost. Only for more elaborate investment and capacity-building projects would the baseline need to include a number of development activities that would otherwise be needed.

¹Other considerations would be the program priority for projects of that type, national goals, equity considerations, the likelihood of a success, and the environmental and social acceptability of the project.

11. To identify reasonable baselines, the GEF and the recipient country would consult broadly. They would draw upon existing studies such as the National Environment Action Plans (NEAPs), regional seas action plans, and other sustainable development plans at the country or sectoral level. Such dialogue and joint determination would help ensure that GEF-supported activities become an integral part of countries' own efforts to protect the environment and help maintain mutual understanding. If financing for the incremental costs failed to materialize for any reason, one could reasonably expect the country to implement its baseline plan. A plausible baseline therefore has several important characteristics.

- It meets national development goals.
- It is technically feasible.
- While broadly consistent with political and social constraints, it is nevertheless an economically attractive course of action.
- It is environmentally and socially acceptable.
- It is affordable. Although baselines must be financially realistic, no individual project should be excluded from the baseline merely because specific financing has not yet been identified.

12. For the more complex cases, GEF would use a baseline that had been prepared for overall development purposes rather than generated specifically for a particular GEF incremental cost estimation. There are several reasons for this:

- First, preparing a baseline involves considerable time and effort and this may not be practicable or cost-effective on a project-by-project basis.
- Second, consistent assumptions for all sustainable development activities help maintain the coherence of development programs. It would not be reasonable to have one estimate of (say) the economic cost of natural gas for the purposes of national development and another for the purpose of planning a GEF activity in the gas sector.
- Third, because the estimate of incremental cost (and therefore the financial transfer itself) is very sensitive to the baseline estimate, the most transparent and credible approach is one that anchors the baseline in broader considerations.

13. Baselines would be required for all activities, including capacity building, and for all focal areas. When the incremental cost of an activity is deemed to be the total cost, explicit justification for the "no-action" baseline would be provided.

GEF supported activities

14. The incremental cost also depends on the choice of the alternative (GEF) activity.
- For the country to regard the activity as a genuine alternative to its baseline activity, the GEF supported activity must deliver at least the same benefits that the country had planned to achieve in its baseline.
 - For the activity to benefit the global environment, it must also deliver global environmental benefits over and above those achievable in the baseline.

15. Because the GEF activity would be country driven, it should be completely acceptable to the country and therefore meet the first four of the five characteristics of the baseline. It need not, of course, be fully financable without recourse to the GEF, but the GEF would be expected to meet the full incremental cost if the project were agreed.

16. One would normally expect that the GEF supported activity would be more costly than the baseline activity, otherwise the country would have chosen this course of action even without taking the global environment into account. However, some of these opportunities may have been overlooked or remained unfinanced, in which case the incremental costs may be negative. Even in these circumstances, however, there may be opportunities for other forms of GEF involvement (see paras 40 ff).

Agreed Full Cost

17. The FCCC requires, and the GEF Instrument makes provision for, certain activities to be funded on an "agreed full cost" basis. Because these activities include items such as studies and communications, for which there is clearly no activity in the baseline, the total costs and the incremental costs are in fact the same. For these agreed full cost items, Indicative Lists of eligible expenditure items may be all that is required. The costs of some activities in support of the Convention on Biological Diversity (certain studies and ecological baseline surveys) are also amenable to a simplified treatment and could be included in Indicative Lists. Criteria for reasonable expenditures will be developed.

Cost

18. The incremental cost is a difference in *cost*. It requires estimates of *costs* of the activity and of the baseline, but not of benefits.

Benefits

19. The following shows that while it is necessary to quantify costs, it is sufficient merely to identify and match benefits:

(a) **Global environmental benefits**

Whenever a global environmental objective is met, the activity has to that extent achieved a global environmental benefit. For example, if the Conference of the Parties to the CBD deems a particular ecosystem or species worth protecting in the global interest, then the incremental cost of a GEF project that protects it is the incremental cost of achieving that agreed global environmental benefit.

(b) **Domestic benefits**

The GEF supported activity must achieve the same national development goal as the baseline. This benefit (i.e., achieving the goal) does not need to be monetized; one only needs to ensure that the goal is met in both cases.

Occasionally, a GEF supported activity will deliver (or seem to deliver) additional or secondary domestic benefits beyond those already identified in the baseline. The analyst should then carefully consider the following possibilities and courses of action:

- Some of costs of the proposed GEF activity might actually be associated with an expansion of the project beyond what is strictly required for the global benefit (and would not therefore be eligible for GEF support).
- Some of the additional benefits (example: erosion control resulting from a biodiversity project) really would have been part of a properly devised baseline reflecting sustainable development at the national level. If the country implements the GEF project they will avoid the costs they would otherwise have incurred in the baseline (in the example: the costs of erosion control that would otherwise have been necessary).
- Some of the additional "benefits" provided by the GEF supported activity may not be national priorities (that is, these additional "benefits" are not in the baseline because they are not regarded as important or because they are unfinancable). For example, a renewable energy project may reduce local pollution levels *below* the standards that would have been acceptable in the baseline. No further analysis would be necessary.

(c) **Separation of domestic and global environmental benefits**

In many cases the same action will yield both global and domestic benefits. A project with global benefits does not therefore automatically incur incremental costs for the global benefits because the domestic benefits alone may provide adequate economic justification for the project, and one should expect the project to be implemented without GEF financing. The provision of GEF resources in such a case would not increase global environmental benefits but only substitute for other sources of finance that would otherwise have been used.

20. The analyst does not therefore need to *separate* global from domestic benefits; rather, it is necessary to specify a reasonable baseline series of actions and an alternative which delivers the same domestic benefits but greater global environmental benefits. Specifying the baseline is no different than preparing a financable development plan, something which governments and Executing Agencies should do anyway for their regular business. Plausible sustainable development plans identify the domestic benefits being sought. The new element for the analyst is to devise a series of actions that is an alternative to this baseline that *maintains* the level of domestic benefits yet *increases* the global benefits while incurring an incremental cost which is estimated by comparing the two situations.

Full

21. The conventions use the term "full" for incremental costs, and this is also the understanding in GEF. This implies two things.

No Reduction

22. First, the grant is to be for the incremental cost and not for a lesser amount calculated by subtracting either any additional domestic benefit or the share of the global benefit that the country enjoys. For example, suppose the incremental cost of reducing greenhouse gases in a project is \$ 5 million. The grant would be \$ 5 million. It would not be \$ 4.5 million on the argument that the improvement in local air quality, beyond national standards, is supposedly worth \$ 0.5 million. And it would not be \$ 4.9 million on the argument that the reduced global warming that results also benefits that particular country by \$ 100,000. This is assumed to be a matter of principle and not merely because of the great technical difficulties in making credible estimates of either of these two benefits.

All Significant Costs Identified

23. Second, every effort will be made to identify *all* the significant incremental costs and not just the most obvious ones. This means the analyst will need to choose a "system boundary" for the analysis that is wide enough to capture the significant changes in cost between the situation with and the situation without the GEF-financed measure, yet narrow enough to be reasonably tractable. Three examples of such attempts, which are not mutually exclusive, are given below:

(a) Indirect costs

Both the project expenditures and the cost savings need to be identified, because the incremental cost is the difference between actual and planned outlays. Where it is believed that there are significant "indirect" costs (such as increased travel costs due to rerouting a road around a protected habitat or lost development opportunities) the comparison should be between states of affairs that are described widely enough to include *all* the effects. In this example, both the baseline and the alternative that includes the proposed GEF activity would have to include travel costs and affected development activities. (This approach is sometimes termed "choosing the right system boundary.")

(b) **Environmental and social costs**

A country is unlikely to agree to a GEF activity that has a negative domestic environmental impact. Even if it did, there would need to be a project component that mitigated this impact. To capture the full costs of the GEF supported activity, the costs of this component would have to be added. (This approach is sometimes termed "projectizing the relevant costs.")

(c) **System costs**

Sometimes a project imposes costs beyond the immediate physical project boundary. For example, a renewable energy project may not only cost more than other sources of energy, it may also impose costs on the whole power supply system by requiring additional reserve capacity to compensate for intermittent supply, or additional transmission lines or line stabilization to compensate for remote location. Clearly all these other costs are also incremental. They can be included by making the comparison not between individual projects but between a system plan which includes the GEF project and a baseline system plan which does not. (This approach is termed "capturing the system costs.")

24. In economic literature, the full cost of a proposed measure is sometimes referred to as the "opportunity cost," reflecting the value of developments that would otherwise have taken place with the resources used by the measure. In the incremental cost framework, these opportunity costs are taken into account through the choice of a system boundary that is wide enough to capture all the avoided costs in the baseline and all the costs of the alternative state-of-affairs that both includes the proposed measure and delivers at least the same domestic benefit as the baseline. As a means of capturing opportunity costs, the incremental cost framework has two distinct advantages:

- it does not require any additional valuation technique for "opportunity costs" as a separate category of costs; and
- by requiring explicit, coherent, and plausible baselines it avoids possible inadvertent double-counting while maintaining consistency and realism in claims concerning foregone opportunities.

Agreed

25. The grant would be agreed between the GEF and the recipient. Because projects are country-driven and because implementation is ultimately voluntary, recipients need not incur incremental costs that they feel would not be reimbursed in full.

26. As the grant would be based on an agreed estimate of the incremental cost, it would be necessary to have a process for making such agreement both probable and transparent. Technical negotiations would need to take place between the GEF and the recipient. Although there would always be some uncertainties, the use of an incremental cost framework as outlined here would greatly narrow the range of possible estimates. The baselines would need

to be derived in a transparent and credible way through a dialogue with the country; they would either come outside the GEF context (such as sectoral investment plans) or be independently verifiable, but would not be ad hoc. Other technical parameters would likewise have to be grounded in broader considerations. Reliance on just the identifiable monitorable expenditures and the planned baseline outlays avoids resort to rather more controversial economic valuation methods (such as those for monetizing environmental benefits and for calculating opportunity costs). This makes agreement more likely.

27. Guidelines would need to be drawn up not only for the *principles* of incremental cost estimation but also for *criteria* of reasonableness and for the *process* of reaching agreement². Such guidelines would be based on the above framework using technical outputs of the *Program for Measuring Incremental Costs for the Environment* (PRINCE). This will be particularly important where there are few automatic incentives for either the Implementing Agency or the recipient to ensure that enough time and effort has gone into making pragmatic yet credible judgments.³

28. Discussions on the incremental cost would take place at various points in the project cycle. Initially the Task Manager would make an estimate in consultation with the technical counterparts in the country. The agreed incremental cost and the basis for the agreement, along with other project details, would be reviewed by GEF at the GEF Operations Committee (GEFOP) meeting that considers the proposal and its financing plan. After any revisions that may be needed following the GEFOP, a final recommendation would be made at the time of Project Approval.

29. In summary, the process of agreement takes place at several levels. First, much of the technical work of PRINCE is being and will continue to be conducted in collaboration with regional centers of excellence in developing countries. Second, baselines are identified in consultation with the recipient country using, wherever possible, outputs from accepted studies undertaken for broad development purposes rather than specifically for GEF projects. Third, the country and the Implementing Agency would confer on the process of estimating incremental cost, starting at an early stage in the project cycle, in order to expedite a reasonable

²The process of agreement on the measures themselves would be described in the operational strategy for the focal area.

³There are some unique operational issues about the process of agreeing on grant amounts that would be paid to firms (rather than to the country). These will be more fully explored in the operational strategy paper on the private sector. The issues include:

- the full incremental costs, since some of the systemic or indirect costs may not be borne by the firm;
- the means of choosing grant recipients in such a way that the benefits of competition are not muted by selective subsidies or attempts to "back winners";
- obtaining commercially sensitive data that is relevant to the estimation of incremental cost (particularly in the light of GEF's openness);
- eligible recipients and a level international playing field; and
- transfer payments (incremental financial costs would need to be paid to be a real incentive) and questions of excess profits.

agreement based on the application of the principles of incremental cost. Fairness and equity would be assisted further through the full documentation and disclosure of the transparent application of these principles in each case.

III. OPTIONS FOR FINANCING POLICY

30. Incremental cost is a guide for the *financing* provided by GEF. It is not meant to determine the eligibility or priority of programs that GEF supports. These are determined by the global environmental objectives of the programs. For climate change and biodiversity, these are set by the Conference of the Parties of the FCCC and the CBD respectively.

31. Although GEF has a special and established role in providing grants in respect of incremental costs, there are several additional ways, consistent with the principle of incremental cost, in which GEF could potentially provide financial support and could be more broadly helpful.

32. The usefulness of these other proposed forms of support can be seen by considering the types of barrier there are to the implementation of measures that would protect the global environment. The new modalities themselves, if endorsed by the Council, will require some further elaboration before being used by the Implementing Agencies.

Barriers to Implementing Measures that would Protect the Global Environment

33. Measures which would protect the global environment may not be taken up in the normal course of events for a variety of reasons. Four economic and financial barriers are described below.

Incremental Costs

34. One clearly identified reason is that the measure in question is expected to impose an incremental cost on the economy. In this case, GEF may provide grant financing for the agreed full incremental cost, assuming the measure and the country are otherwise eligible.

Financial Constraints

35. A second reason is that the measure creates a short term financing burden.

- *Economic measures that are financially constrained.* Some of the measures that would protect the global environment are economic even in the absence of global environmental considerations and therefore have "negative incremental costs"; they should in principle be a part of the "baseline" and not require any GEF grant support. Yet they may remain unfunded because of a shortage of finance or debt-service constraints. (Many energy conservation projects may be of this type.)
- *Measures with a financing gap.* Where the GEF-funded measure imposes an incremental financing requirement, there would be a financing gap even after the

incremental cost has been financed by a GEF grant. For example, some renewable energy projects may be more capital intensive than the fossil fuel technologies they can replace even though over time there will be significant cost savings resulting from fossil fuel that no longer needs to be purchased. Thus the renewable energy plant may not be readily financable within existing debt service constraints because the incremental cost (which is reimbursed through the GEF) may be smaller than the initial incremental financing requirement.

Transactions Costs

36. A third reason is the existence of "transactions costs." These are costs that would be incurred by the project because of barriers to the efficient operation of the market, such as lack of information or underdeveloped skills base. The traditional response is to finance demonstration projects and information and advisory centers, or other ways of building up a self-sustaining "critical mass."

Risk

37. The fourth reason is the existence or perception of institutional, commercial, or technological risk. For this to be a factor, the risk must itself be *incremental*, since these types of risk are already present in existing plans. For example, there are baseline risks in schemes to privatize the electric power sector and to continue industrial expansion. But where, in the global interest, a country is contemplating a new technology base with which it is unfamiliar or for which it does not have a fully developed skills base, or is setting up a new institutional form for protection of wildlands, the risks may be both real and incremental.

Financing Options

38. GEF can be helpful in inducing appropriate measures by not only offering grants in respect of incremental cost, but also by exercising one or more of the following proposed financing modalities. The financing modality selected in each case should be appropriate to the type of implementation barrier. These barriers could be identified by sequential consideration of the possibilities, and the financing justified accordingly. For example, it would not be assumed that a grant would be required if other possibilities had not been systematically eliminated.

39. The options, which are non-exclusive and capable of being used concurrently, are facilitation, concessional finance, contingent finance, lump sum grants, and recurrent grants.

Option A: Facilitation

40. Where a strategic program to protect the global environment has been devised, GEF could first attempt

- to identify and coordinate appropriate sources of development financing;

- to broker regional agreements for cost sharing where cooperative regional interests are strongly involved (e.g., sharing the costs of protecting an international lake with significant biodiversity and for sharing its waters and economic resources);
- to devise and implement innovative sources of financing (e.g., to prepare both the projects *and* the institutions that would mobilize the resources to cover the costs on the basis of user charges or polluter-pays principle); or
- to mobilize private sector sources of funds in other ways.

Option B: Concessional Finance

41. Concessional finance is a mixture of a loan made on regular terms and a grant. Several situations, such as the following, might warrant consideration of concessional finance.

- Measures that would protect the global environment and are even economic in their own right, yet remain unimplemented because of financial constraints. On the one hand, it makes little sense to finance more costly (that is, positive incremental cost) projects where there are such less costly (negative incremental cost) opportunities that remain unfinanced. On the other hand, providing grants for projects that are economically attractive is clearly inappropriate.
- Measures that are financially constrained even when a grant has been made for incremental cost.
- Measures that are designed to overcome transactions costs (for example, an energy efficiency advice center). Generally, such measures are economic but it is difficult to recover the costs because the beneficiaries are diffuse. Efforts should be made to design cost-recovery mechanisms in order to make the project self-sustaining and to avoid perverse incentives for project design.

42. In the above cases, after facilitating finance to the greatest extent possible and satisfying itself that without additional finance the measure would still not be implemented, GEF could consider providing a loan to overcome any remaining financial constraint. Such a loan could be a one-off repayable loan or a *revolving fund* for activities of a specified type.

43. In developing a policy based on this option, two aspects will require particular attention:

- It will be necessary to ensure that GEF would not be substituting for other sources of financing (including cost recovery and user charges), but was required to meet a financing gap that exists only as a consequence of the proposed GEF measure.
- The degree of concessionality would need to be appropriate given the types of institutional risk and other barriers that had held up financing from other sources.

Option C: Contingent Finance

44. A contingent loan is one which is normally repayable but for which part may be forgiven (that is, turned into a grant) under specified contingencies. In GEF, these contingencies should justify the grant on the basis of an incremental cost whose existence or size was not known at the outset.

45. This modality would be particularly useful where there are technical or institutional risks. For example, GEF could provide the initial finance needed to establish a sustainable rainforest activity on the understanding that it would be repaid, at least in part, from the profits of the enterprise. If the project, which may be financially risky, failed to become economic because of certain contingencies (not including operational inefficiency), part of the loan could then be forgiven, i.e. turned into a grant for the incremental costs that were actually incurred. The modality would also be useful where the project is costly and the incremental cost is sensitive to uncertain future events. In such cases, it may be too financially risky for the GEF or the recipient to agree at the outset on the incremental cost itself. But it may be relatively risk-free to agree on a basis for estimating later what the incremental cost will have been. This basis could be monitorable parameters (such as demand for rainforest products, world oil prices, general economic factors, and institutional factors) and might include a floor or a ceiling.

46. The primary modality would be grants in respect of the incremental costs estimated according to the principle set out in Section II. Within this existing modality, there are various options for disbursement. The disbursement method needs to be chosen carefully in order

- to control the risks for both the recipient and the GEF;
- to minimize administrative costs; and
- to maintain adequate incentives for efficient operation of the project as a way of minimizing recurrent incremental costs.

47. The following two broad alternatives are proposed, although some flexibility will be needed to take account of the project specifics and the use of any cofinancing or concurrent GEF financing in the form of loans.

Option D: Initial Lump Sum Grants

48. One way is to make the best possible estimate of incremental cost before project approval and disburse the whole amount as soon as possible thereafter, against particular project expenditures. The advantage of this method is simplicity and low administrative costs for GEF, and certainty of financing for the recipient. The disadvantage is that the actual incremental cost may in future turn out to be bigger or smaller than the predicted amount which was the basis for the grant determination. The recipient and GEF bear these respective risks. This disbursement method is recommended for small projects where the amount at risk is small.

Option E: Recurrent Grants

49. Another way is to monitor the costs and to make payments for incremental costs as and when they occur. The advantage of this method is that it reduces the risk of making either an overpayment or an underpayment. The disadvantage is that it raises administrative costs and that it makes the ultimate amount committed uncertain. This method is recommended when the incremental cost is recurrent. The administrative costs could be contained through *trust fund* arrangements, and the uncertainty could be contained by putting a *cap* on the payments.

IV. OPERATIONAL GUIDANCE AND CODIFICATION OF EXPERIENCE

50. Operational guidance will be prepared by the GEF Secretariat on the basis of the policy decisions of the Council, taking account of the guidance of the conventions and technical conclusions of the PRINCE.

The Policy Guidance of the Conventions

51. GEF operational guidance for the Implementing Agencies would be necessary in order to give operational expression to the policy guidance GEF receives from the Conferences of the Parties (CoPs). The codification of operational experience in applying such guidance would likewise be a useful input for the continuing deliberations of the CoPs. The Intergovernmental Negotiating Committee of the FCCC, at their Tenth Session in August 1994, "concluded that the various issues of incremental costs were complex and difficult and that further discussion on the subject was therefore needed. It also concluded that the application of the concept of "agreed full incremental costs" should be flexible, pragmatic and on a case-by-case basis. Guidelines in this regard would be developed by the CoP at a later stage on the basis of experience." The Intergovernmental Committee for the CBD also has the matter under review.

Operational Guidance for GEF

52. Consistent with this interim policy guidance from the convention bodies, the broad approach to incremental cost outlined in Section II could be translated into operational guidance for each focal area and for specific types of activity (such as capacity building, power sector projects, biodiversity measures). This would need to take account of many technical features that are currently being explored through PRINCE.⁴

⁴There is an international advisory group for PRINCE on which secretariat staff from both the INC/FCCC and the CBD participate, along with eminent persons bringing the perspectives of developed and developing countries, STAP, and cofinanciers. In addition, the work plan is drawn up with inputs from the Implementing Agencies. The studies themselves are done with maximum participation of developing countries, through regional centers of excellence.

53. The operational guidance would be developed by the Secretariat, in conformity with the policy adopted by the Council and in consultation with the Implementing Agencies. It would cover such matters as:

- Principles for estimating incremental cost in various focal areas and sectors and for various activities, and the treatment of special issues such as incremental risk and the private sector.
- Pragmatic use of resources for the process of estimating and agreeing on incremental cost. The intention would be to balance the administrative costs and time requirements for estimating and negotiating the incremental cost against the likely magnitude of any error in the estimate. As incremental costs are very sensitive to the assumptions used, it is probable that large projects will require substantial analysis.⁵ The depth of the analysis would depend on the likely size of the incremental cost, the degree of uncertainty about it, and the quality of existing studies particularly those that would support a judgment about the baseline. Small capacity-building and technical assistance projects though could be dealt with expeditiously using simple procedures and rules of thumb.
- The procedures for negotiating agreement with recipients case by case. These would detail the steps in the process as well as the criteria for relating technical arguments to those steps.
- Appropriate documentation.
- Procedures for monitoring, review, and evaluation by the Secretariat and grounds for entertaining an appeal by the recipient.
- Appropriate use of the reference value as an input to (i) grant determination; (ii) project selection; and (iii) estimates of aggregate resource requirements.
- Criteria and methods for determining non-grant financing amounts.
- Disbursement modalities.

Guidance for 1995

54. Henceforth, all projects would be subject to an incremental cost analysis that conforms to the principles set out in Section II. In particular, the recommended grant for every project would be justified on the basis of costs that are incremental to those of an *explicit* baseline that meets national development goals in a technically and financially feasible, economically attractive, and

⁵In the case of one large project, estimates based on alternative yet still reasonable assumptions have varied between \$ 5 million and \$ 30 million.

environmentally and socially acceptable manner. The degree of analysis, as always, would depend on the complexity and size of the project.

55. In recognition of the fact that the Implementing Agencies are not yet very experienced in this form of analysis, the GEF Secretariat will provide additional assistance in the form of staff training and reviews of selected analyses prepared by the Implementing Agencies. Because the detailed guidelines envisaged under the incremental cost policy would take several months to prepare, the documentation requirements on the incremental cost analyses would be phased in during FY 1995.

56. Training for Implementing Agency staff will be an important part of the GEF operational guidance, especially in view of the professed need for such training in the context of biodiversity.

SUMMARY OF PRINCE ACTIVITIES

1. The *Program for Measuring Incremental Costs for the Environment* (PRINCE) is a Pilot Phase program of technical studies that analyzes the application of incremental cost framework to various global environmental issues. PRINCE is concerned with only incremental cost, as set out in Section II, and not with other operational issues such as project screening, nor with other analytical issues such as benefit valuation and cost-effectiveness of proposed measures.
2. PRINCE work includes methodology development, case studies, and the dissemination of findings. Each methodological study refines procedures for applying the incremental cost framework, and each case study applies the methodologies in a real setting. These case studies, and the dissemination of the results, are undertaken by Regional Centers of Excellence (RCEs) located in developing countries. Dissemination is a particularly important strand of PRINCE work, as it helps bring about a shared understanding of GEF operations.
3. Since the initiating workshop in New Delhi last year, the results of PRINCE studies have been made available through many channels: GEF Working Papers, international conferences, a briefing session for GEF Participants, a training program for UNDP staff, and workshops on specialized tasks such as estimating country level costs for the phase-out of ozone depleting substances. In July 1994, PRINCE sponsored a seminar in Quito, Ecuador at the Latin American Energy Organization (OLADE), a Regional Center of Excellence for PRINCE work. This seminar, *Incremental Costs of Reducing Greenhouse Gas Emissions in Power Generation*, was a regional forum for staff of the power utilities in Colombia and Costa Rica for their PRINCE case studies showing the application of the incremental cost framework to power system expansion planning.
4. PRINCE continues to study analytical issues that are important for GEF operations. In the electric power sector, where earlier PRINCE work showed the importance of the *full* incremental costs incurred by the system as well as the project, further methodological refinements are being pursued. These include: treatment of regional grid inter-connections, reoptimization of expansion plans to include renewable energy, the estimation of transaction costs, and the framework for negotiating an *agreed* incremental cost. Work on capacity building is currently underway. Initial work in biodiversity has identified potential sites and institutions for case studies in Mexico, to estimate incremental costs of interventions that address the intermediate and ultimate causes of loss of biological diversity. Discussions have also taken place with the Asian Wetlands Bureau and African institutions.

5. With the assistance of the Implementing Agencies, PRINCE will also review the operational experience with incremental cost estimations using the GEF Pilot Phase portfolio as source material. This review cannot be comprehensive because few Pilot Phase projects were developed with explicit baselines and because the full range of potential incremental cost measures is not represented in the portfolio. Nevertheless, some instructive examples of the sensitivities, limitations, and operational use of incremental cost are expected.

6. PRINCE will help prepare training material for both government negotiators and Implementing Agency staff involved with estimating incremental cost. Estimation of incremental costs will involve a series of cost assumptions both about the baseline and the alternative. Agreement will also need to be reached on the design of the disbursement profile. These agreements are required regardless of the focal area and the intervention being considered. Pragmatic negotiations within the incremental cost framework will be assisted by various tests of reasonableness, coherence and consistency and *post hoc* verification and adjustments.

EXAMPLES OF INCREMENTAL COST ANALYSIS

1. This annex presents a few simplified applications of the incremental cost framework to typical GEF measures. The framework is a comparison of a baseline plan and an alternative plan in terms of costs, domestic benefits, and global benefits. The applications were selected to illustrate the different ways in which incremental costs can be incurred and global benefits secured. In each application, it is assumed that the alternative plan, which includes the proposed GEF measure, has been designed to yield domestic benefits at least equivalent to those of the baseline. These benefits need not be monetized for the purposes of this incremental cost calculation. The first table shows the general framework.

General Framework	Cost	Global Benefit	Domestic Benefit
Baseline	C_b	GB_b	DB
Alternative	C_a	GB_a	DB
Increment	$C_a - C_b$	$GB_a - GB_b$	0

2. The first example, below, is of the preparation of greenhouse gas inventories. It illustrates a situation where the full incremental costs are equal to full costs of the project. In this case the baseline is one of no inventory preparation. The only benefit assumed to accrue from their preparation is global. Any incidental domestic benefits, such as those that might accrue from technical training or from a subsequent south-south consultancy, are assumed to be negligible.

Example 1: Incremental costs = Full costs		Cost	Global Benefit	Domestic Benefit
Baseline	No action	0	0	0
Alternative	FCCC Article 12.1 Communication Activities	C_a	GB_a	0
Increment		C_a	GB_a	0

ANNEX B

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3. For the second example assume that there is an on-going conventional power systems planning course offered to developing country engineers offered by a regional institution. The curriculum can be developed to extend the training offered in this course to include global environmental considerations. This extension would incur incremental costs.

Example 2: Incremental Capacity Building		Cost	Global Benefit	Domestic Benefit
Baseline	Conventional Power Systems Planning Training Course	C_b	0	DB
Alternative	Power Systems Planning Training Course incorporating Global Environmental Considerations	C_a	GB_a	DB
Increment		$C_a - C_b$	GB_a	0

4. Next, suppose a country has plans to set up a factory to manufacture pulp. The effluent from the factory, even though in conformity with national environmental standards, could threaten a nearby wetland of unique global significance but, let us suppose for this example, of no domestic value. Changing to a process that minimizes pollution coupled with reliable state-of-the-art pollution control devices could minimize this threat, but impose additional costs. These incremental costs would be eligible for GEF financing. The domestic benefits both in terms of the quantity and quality of the pulp are maintained.

Example 3: Prevention of Pollution Threatening Biodiversity		Cost	Global Benefit	Domestic Benefit
Baseline	Proposed pulp factory threatening a unique wetland	C_b	$- GB_b$	DB Pulp: x tons/year
Alternative	Factory with state-of-the-art pollution prevention processes, water pollution control devices	C_a	0	DB Pulp: x tons/year
Increment		$C_a - C_b$	GB_b	0

5. In all examples thus far, either the baseline or the alternative had zero global benefits. What is relevant in any intervention, of course, are the incremental global benefits. In the final example, both the baseline (a power sector investment plan including coal-fired plant) and the more expensive alternative (a power sector investment plan that relies on gas-fired plant) have negative global benefits (emissions of greenhouse gases). The global benefits accrue from the fact that emissions in the alternative are smaller than those in the baseline.

Example 4: Generation of More Benign Electricity		Cost	Global Benefit	Domestic Benefit
Baseline	Plan with coal-fired power plant	C_b	$- GB_b$	DB (x kWh)
Alternative	Plan with gas-fired power plant	C_a	$- GB_a$	DB (x kWh)
Increment		$C_a - C_b$	$- GB_a + GB_b$	0