

EnCorr

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PROJECT MANAGEMENT FOR GEFSEC

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Project Name: Capacity Building for Improving National Greenhouse Gas Inventories

VPU/Dept/Div: GEF	Date Logged: 08/17/2000 02:05:55 PM
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CORRESPONDENCE DESCRIPTION:

From:	Eduardo Fuentes
Organization:	UNDP
Reference #:	
To:	Mr. Keneth King
Dated:	08/14/2000
Type:	EA CC
Subject:	PDB EA: Global: Capacity Building for Improving National Greenhouse Gas Inventories

ACTION INSTRUCTIONS:

Please review and/or technical comments for final endorsement/approval

INFORMATION COPIES:

Alan Miller, Avani Vaish, Michael Sanio, Yasemin E.K. Biro/Person/World Bank, Days



United Nations Development Programme
GLOBAL ENVIRONMENT FACILITY (GEF)



August 11, 2000

Subject: CEO Approval of PDF-B entitled : Capacity building for Improving National Greenhouse Gas Inventories

Dear Mr. El-Ashry,

We are pleased to confirm that the request for US\$ 298,470 in PDF-B resources to move from Pipeline Entry to Work Program Inclusion for the project proposal entitled **Capacity building for Improving National Greenhouse Gas Inventories** has gone through the 5-day no-objection review (July 28 to August 3, 2000) and is hereby forwarded to you for final approval.

Comments of the GEF Secretariat and Implementing Agencies on the PDF-B have been taken into account and included in the attached PDF-B Brief.

The Concept Paper was discussed and approved for entry into the GEF pipeline at a Bilateral Review Meeting between the GEF Secretariat and UNDP on July 27, 2000.

We look forward to receiving your signature below so that we can proceed with preparing a UNDP Project Document.

Sincerely,

Mohamed El-Ashry
Chief Executive Officer
Global Environment Facility

Eduardo Fuentes
Officer-in-Charge
UNDP-GEF

CC: W. Lusigi, R. de Mesa (GEFSEC); A. Salau, R. Hosier, C. Serpell (UNDP-GEF)

**PDF B PROPOSAL FOR FUNDING
GLOBAL ENVIRONMENT FACILITY**

1. **Country:** Global Programme, Initially Focusing on West Africa
2. **Focal Area:** Climate change
3. **Operational Programme:** Enabling activity
4. **Project Title:** Capacity building for Improving National Greenhouse Gas Inventories
5. **Total Project Cost:**

West African Region	US\$ 2.5-3 Million
Anticipated GEF Contribution	US\$ 2-2.5 Million
6. **Global Program Costs:**

Up to seven projects	US\$ 18-21 Million
Anticipated GEF Contribution	US\$ 14-18 Million
7. **PDF request:** \$US 298,470
8. **In-kind contributions:** \$US 40,000
9. **Requesting Agency:** UNDP
10. **Executing Agency:** UNOPS
Block: PDF Block B
11. **Duration:** 8 months
12. **Project Summary:**

This PDF will initiate a programmatic approach for improving national greenhouse gas inventories with an emphasis on capacity building for developing emission factors, appropriate data and implementation of good practices in data management. It is designed as a flexible, integrated package of activities to reduce the uncertainty and minimise the bias of national inventories. It explores ways to strengthen institutional arrangements for compiling of inventories in a sustainable way. A critical part of the approach will be to develop a set of criteria for selecting emission factors and other relevant data required for improvement, and the use of standard methodology for data collection where these exist.

It will begin with the West African region and develop a common approach that can be applied in other regions. This work will form an essential part of second National Communications to the United Nations Framework Convention on Climate Change (UNFCCC). As countries meet the conditions for participation, they can adapt the approach for analysis initially developed in the West African region, thereby engaging in their own regionally-focused initiative driven by the priorities of countries within the region. It is expected that as many as seven sub-regions and regions may choose to participate in such an activity, making the programme a global one, consisting of several inter-linked projects.

Project objective

The overall objective of this project is to enable a significant number of countries to improve the quality of their national greenhouse gas inventories in the context of non-Annex I National Communications through capacity building, as envisaged by Decisions 10/CP.2, 11/CP.2, 2/CP.4, and 10/CP.5, and Articles 4.1(a)(b) and 12.1(a) of the United Nations Framework Convention on CC. Under Decision 10/CP.2, non-Annex I Parties:

- are encouraged to 'formulate cost-effective national and, where appropriate regional, programmes aimed at the improvement of the quality of local emission factors and appropriate data gathering' (para 13);
- 'should make efforts to obtain field observation data decrease the uncertainties associated with the inventory of these emissions, taking into account the further development of the IPCC methodology' (para 11);
- 'may provide a brief description of existing institutional arrangements which are relevant in the preparation of the inventory on a continuing basis' (para 4).

The objective of the project will be achieved by developing capacity in non-Annex I Parties for improving emission factors and appropriate data through data collection procedures, and by strengthening national institutions to estimate national greenhouse gas emissions and removals. The outputs of the project will contribute significantly towards the preparation of national inventories for second National Communications.

Global significance

Under Article 2 of the Convention, the stabilisation of greenhouse gas emissions to the global atmosphere is a central objective for all signatories of the UNFCCC. To estimate progress towards this objective, all Parties report their national greenhouse gas inventories as a part of their National Communications to the UNFCCC. Yet, two of the major constraints to improving the quality of greenhouse gas inventories in non-Annex I Parties are the lack of data and resources to obtain new data.

The main issue of global significance is related to the accuracy of national greenhouse gas inventories. More accurate inventories will enable non-Annex I Parties to identify the major sources and sinks of greenhouse gases with greater confidence, and thus to make more informed policy decisions with respect to appropriate response measures. In this way, improved national greenhouse gas inventories will contribute to the effective implementation of the UNFCCC by non-Annex I Parties.

Background

National greenhouse gas inventories are a core component of non-Annex I National Communications. From the national reports, it is obvious that the reliability of greenhouse gas inventories are a major concern for most Parties. Several Parties cite the lack of data as a major data gap in their national inventories and have requested additional support to remedy this situation.

To date, technical assistance has already been provided to non-Annex I Parties by the National Communications Support Programme (GEF/UNDP/UNEP) for preparing and improving their inventories. The Support Programme has also held a number of regional thematic workshops on

inventories, where country concerns have been voiced. While the financial assistance provided by the Global Environment Facility (GEF) has been essential, assistance should continue to be provided if sustainability of national inventories is to be achieved and if the momentum that has been gathered to date is to be maintained.

Through active discussions in the regional workshops of the Support Programme, current thinking among countries has evolved on how to improve national inventories in a cost-effective manner. While much of the previous discussion has centred on emission factors, there is a gradual realisation that the quality of inventories is the net result of a more complex process. The primary change in thinking is that a broader number of areas need to be looked into in order to move towards sustained and institutionalised ways of preparing national greenhouse gas inventories. Developing national capacity for archiving and updating inventory data is critical to the sustainability of the inventory process.

The Intergovernmental Panel on Climate Change (IPCC) Guidelines recognise that a range of input data are fundamental to the quality of the inventory and recommend the use of national, not default data where possible. Data include emission factors, activity data, and default assumptions of the method itself. A large amount of information is often necessary to create some national inventories; there are potentially hundreds, if not thousands, of input data required. It has been cited that for some inventories, a ten-fold increase in the cost of inventory preparation would only reduce the uncertainty of the estimates by one percentage. Given resource constraints, selecting national priorities for data collection becomes critical.

There are other issues. Imagine the situation in a country, which starts a project to prepare an inventory for its National Communication. The project is sponsored by a multilateral or bilateral donor and has a duration of two to three years. A project co-ordinator is hired. He or she subcontracts the different sectors of the inventory to the various research institutes that specialise in energy, industry, agriculture, land-use change and forestry, or waste. In some cases, resources may even allow for the collection of original data where these are required for the inventory. Once the inventory is complete and the project comes to an end, the inventory team breaks up, and the members may even leave the institute that is responsible for the inventory. Over time, important references and sources of data are lost as these are not systematically documented. No data management or collection systems are set in place. In short, when the next inventory is updated a few years later, the 'wheel is reinvented'. A new inventory team is established, the data gaps have to be identified again, with the result that there may be inconsistencies between different inventories for the same year. These inconsistencies create problems for establishing credible emissions estimates for the base year. This type of process is not cost-effective, and ultimately reduces the transparency, consistency, comparability, completeness, and accuracy of national greenhouse gas inventories.

Several needs have already been identified under the Support Programme that will strengthen capacity in non-Annex I Parties to improve national inventories. This project proposes a programme of activities with the following initiatives:

- Giving greater attention to procedures for *selecting* and *prioritising* emission factors and other appropriate data required for the inventory;
- Placing more emphasis for *identifying* and *testing cost-effective methods* for data collecting appropriate to national circumstances;

- Giving priority to *publishing* research on emission factors so that the results can be validated and contribute to the IPCC process;
- Considering ways of *establishing* and *strengthening* national institutional arrangements for archiving and updating national inventories;
- Strengthening *data sharing* and information exchange of regional data through workshops and regional centres;
- Developing an *integrated training package* that considers all aspects of data collection, including incentives for their collection, data management and other procedural matters related to data quality.

A regional approach is proposed for cost-effectiveness. In this proposal, the term region can also refer to a sub-region.

Project description

This project will contribute to the solution of the above problems by developing and testing a common approach to contribute to the overall sustainability of the inventory process and to improve the quality of national inventories. The common approach should be flexible enough to meet the national needs of any given region.

This section of the proposal describes both the PDF phase and elements of the full project.

I. The PDF Project

The project will be based on a two-phased approach.

Phase I: In the first phase, there will be an assessment of current information in West Africa that will draw upon the information from inventories of initial National Communications and data gathered through the Support Programme. The assessment will include a preliminary evaluation of existing and new data generated by the initial National Communications, and research methods and innovative practices under implementation. A critical part of Phase I will include developing a procedure for selecting and prioritising emission factors and data to be improved from among different sectors. The cost of different methods of data collection and management will also be considered. The aim of this phase is to develop consensus for the elements of a common approach for implementation in the second phase of this PDF project.

The common approach will consist of several elements. A list of the criteria will be developed that follow normal GEF requirements for projects such as cost effectiveness, coverage without duplication, use of best practices, and appropriate sequencing of activities. The approach will also consider national institutional structures and data management issues more generally. More precise criteria are described under the discussion on the full project.

Phase II: In the second phase, the common approach will be implemented through a series of workshops. Each element of the common approach will be tested and revised before implementation in different regions, consistent with national priorities. A number of cross-cutting issues that are applicable to other regions are likely to emerge, especially procedures for reducing uncertainty and minimising bias, as these issues are generally universal. These cross-cutting issues will form the basis of an integrated training package that can be modified

according to the specific needs of a region. This project will draw upon on the Revised 1996 IPCC Guidelines and the IPCC Good Practice Guidance.

In subsequent PDFs for the other regions, the draft approach will be further adapted to the participating countries. The approach can then be applied and carried out as an inventory project within that region.

II. The Global Programme

The approach prepared as part of this PDF will serve as a common or shared framework for all regions wishing to engage in national and regional inventory activities. After the initial project for West Africa, the framework will be further elaborated, adapted and applied to other regions as countries begin participating. Separate PDFs will be required to tailor the approach to each new participating region. It is anticipated that each subsequent participating region will follow the same steps, with the exception of the development of the programmatic approach. Countries of a region will be free to begin working on the modification of this approach when:

- The countries from the region have prepared, at least in draft form, their initial national communication to the UNFCCC and therefore have both a national inventory and a ranking of national priorities of sources and sinks of GHGs;
- The countries within the region place high priority on improving their national inventories;
- The countries are not already developing emission factors through their Phase II enabling activities; and
- The GEF Focal Points in the countries within the region endorse the regional PDF application.

Components of the full project will likely separate into national level and regional activities. Countries may participate in one or all of the following components¹:

Component 1: Emission factors and appropriate data gathering

Under this component of the PDF, countries will participate in a regional level activity to compile existing emission factors, and other relevant data, for national inventories. The requests from countries to the Support Programme and the project concepts of the UNFCCC workshops on emission factors and activity data (Havana, Cuba, 16-18 September, 1998; Accra, Ghana, 6-8 August, 1999) will be reviewed as part of this process.

Under the leadership of one or more regional centres, a group of national inventory experts will carry out this activity, taking care not to duplicate any activities under the IPCC inventory programme. The national project co-ordinator will nominate the inventory expert in each country. From this exercise, a number of data gaps will be assessed and new data will be identified for further development. It is intended that under the regional approach, national activities would not be duplicated.

The procedure for selecting and prioritising data will systematically apply several criteria under the common approach. Some of the most important are; (1) magnitude and contribution of greenhouse gas emissions and removals for a given source or sink at the national level; (2) the sensitivity of the calculation estimates to the proposed data, including an assessment of the extent

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to which the uncertainty of the estimate will be improved through more accurate emission factors and other data; (3) the relevance of the source/sink and the sector of the inventory to meet national priorities; (4) the feasibility of implementing abatement measures, including technology transfer, for a given sector; (5) the availability of low-cost data collection methods, including standard or internationally-accepted methods.

Once the procedure has been established and agreed with national teams, the process of developing capacity for data collection may begin at the national level among participating countries. Any new data generated will inter-compared at the regional level. Efforts will also be made to publish any new data, thus allowing this information to feed into the IPCC review process and to improve the IPCC Guidelines.

Component 2: Strengthen national arrangements for archiving, updating and managing of greenhouse gas inventories

This component will focus on enhancing national arrangements in non-Annex I Parties to archive and update inventory information consistent with the IPCC Guidelines. It will focus on data management procedures for collecting, processing, updating and reporting national inventories following the IPCC format of worksheets, and summary and sectoral tables. Providing technical computing support may be one element of this component.

Specific activities for this component may include:

- *archiving* of relevant national data (i.e., activity data, emission factors, conversion factors) for several years;
- *identifying* data sources and national experts that have been involved in inventory preparation in a national database;
- *periodic updating* of inventories in a cost-efficient manner;
- *comparing* inventories across years in order to identify trends in emissions and removals;
- *documenting* the selection process of national activity data, emission factors, and other conversion factors used in inventory preparation process;
- *documenting* methodologies and assumptions used; and
- *validating* conversion of units and other data.

Key features of national data arrangements include:

- A flexible system taking into account national circumstances as well as the requirements of UNFCCC and IPCC guidelines.
- National experts would be responsible for the information entered into the national data system. Records of any changes to the system would be registered.

Component 3: Training for the implementation of good practices for preparing national inventories and dissemination of the underlying data

The purpose of this component is to design and implement a flexible training programme to support the two components described above. This component would be carried out at the regional level and would be more fully fleshed out at the PDF phase, drawing upon the project concepts of the UNFCCC Accra workshop.

As such, the training programme would be divided into three main activities, namely, those which address scientific methodology, such as the IPCC Guidelines and Good Practices; disseminate data under Component 1; and, relate to institutional structures and data management under Component 2. At this point, it is not possible to describe this component in greater detail, except that regional experts would be fully involved, probably through a training-the-trainers programme.

III. Thematic areas to be covered

The Support Programme has found a recurring set of generic issues emerging from its thematic workshops as described above. The priorities by sector as reported by countries vary by region, although many countries stated that all sectors are a priority. However, energy and land-use change and forestry (LUCF) are generally the most frequently-cited sectors for CO₂ emissions, with a greater emphasis on the agriculture and waste sectors for the non-CO₂ gases. Table 1 shows a preliminary breakdown of priorities that will need to be fully developed for the PDF. The actual priorities would have to be assessed during the PDF for each region.

Table 1: Priority areas identified for development of emissions factors, by region (preliminary)

Region/ sub-region	Priority areas identified for development of emissions factors							
	Energy	Transport	Industry	Solvents	Agric.	Waste	Cross-Cutting	LUCF
Europe/CIS	X	X	X	X	X	X	X	
Africa	X	X	X		X		X	X
Arab States								X
Central and Sth America								X
Asia	X	X	X					X
Sources: Workshop report, UNFCCC workshop on emission factors and activity data (Accra, Ghana, 6-8 August, 1999) Support Programme country consultations								

IV. Countries participating in the project

Potentially all countries may participate in some, or all, of the components of the programme. Although it is envisaged that only countries that are in advanced stages of their National Communication will benefit from the project, any region meeting the conditions set forth above may apply for support to begin working on their own regional project. The PDF project will establish both a process and an approach that subsequent regions may follow, depending upon the readiness of a region to begin activities and the availability of complementary funds from other multilateral and bilateral donors. In this way, the project will adopt a flexible and programmatic approach over its 3-5 year lifetime in response to the evolving needs of countries.

Through the dialogues established with countries under the Support Programme, we estimate that at least 5 regional/sub-regional groups could begin immediately, with the remaining groups in early to mid-2001¹. It is expected that at least 70-90 countries could eventually be part of the

¹ It is not anticipated that full projects would be developed in all regions for all components.

programme. However, all countries could potentially benefit from the Component 2 on data management and Component 3 on training.

Institutional arrangements

The proposal will be developed by UNDP with full input from West African countries and representatives from each of the sub-regions. Over the PDF phase and implementation of the full project, the highest level of co-ordination will be carried out with relevant institutions and organisations (e.g. UNFCCC, IPCC, UNEP) and the National Communications Support Programme to ensure that initiatives are fully complementary. An especially high level of co-ordination is expected with the IPCC inventories group and the non-Annex I consultative group of experts of the UNFCCC.

Description of proposed PDF activities

During the PDF phase of the project (September 2000 – April 2001), three activities will be undertaken as discussed earlier:

- The full project proposal will be developed.
- For each region, beginning with West Africa, a summary of inventory activities from enabling activities will be completed.
- A group of technical experts will prepare a draft common approach. Preparatory work and 2 workshops will be required.

PDF outputs

During the PDF phase of the project (September 2000 – April 2001), three outputs are anticipated:

- A summary and assessment of inventory activities for the West African region will be completed.
- A full project proposal will be developed for the West African region and will identify potential regional centre(s) of excellence as the executing agency.
- A group of inventory experts, including those from each of the proposed regions that may later participate in the programme, will prepare a draft common approach as initial input to the project for carrying out the full project.

For the full project for each region, the following outputs are expected:

- A variety of new emission factors and other data for a range of sectors (Component 1);
- A regional compilation of emission factors and data in consistent format with the IPCC database (Component 1);
- New or improved data identified for publication (Component 1);
- National inventories of improved quality through strengthened national arrangements and data management (Component 2);
- National teams fully trained in the practice of inventory preparation, data collection and management (Component 3).

Eligibility

Countries that have ratified the UNFCCC and that are non-Annex I Parties are eligible for GEF funding through the financial mechanism of the convention.

National level support

West Africa is suggested for the pilot phase. The GEF Focal Points of Burkina Faso, Mali, Nigeria, Senegal and Togo endorse the regional PDF application. For participating countries that would be included in the Global Programme, see Section IV (p. 7) of the Project Description.

Justification/global benefits

This project is designed to respond primarily to the COP guidance under Decision 2/CP.4 with respect to national inventories of non-Annex I Parties. This decision states to 'Assist them with studies leading to the preparation of national programmes to address climate change compatible with national plans for sustainable development in accordance with Article 4.1 (b) of the Convention and paragraph 13 of the annex to Decision 10/CP.2.'

Timetable

Meetings and Tasks	Timing by Month							
	S	O	N	D	J	F	M	A
1. Draft a plan for the project	▼							
2. Prepare a summary of inventory activities (Phase I) (including an initial expert workshop)	▼	→		▼				
3. Convene a regional group of experts				▼				
4. Prepare a draft common approach (Phase II)				▼	→	▼		
5. Reconvene regional group of experts to evaluate approach						▼		
6. Develop a Project Brief						▼	→	▼

Budget

PDF B: 8 months; budget \$298,470

GEF full scale project: Initially, a 2-3 year effort is anticipated for West Africa, but projects in other regions could begin after about 6 months. This project would be expected to cost roughly \$2.5-3 million in total, of which GEF may be asked to contribute the incremental costs, perhaps in the order of \$2-2.5 million.

Anticipated GEF Programme: If all regions that are considered eligible choose to participate in this programme, activities would be expected to require 3-5 years to complete and in the order of US\$ 14-18 million would be required from GEF. The entire package might be expected to cost as much as \$18-21 million, including resources raised from other donors and in-kind country support.

Monitoring and Evaluation

Not only will careful monitoring of the PDF activity be undertaken, but this PDF, designed to develop a programmatic approach for the eventual participation of other regions, will establish benchmarks for participation of other regions. This will include progress indicators that will be linked to continuation of future activities.

<u>PDF budget components</u>	<u>GEF</u>	<u>In-kind support</u>
1. Part-time Chief Technical Advisor	\$33,250	-
2. Part-time Technical Consultants (6 months @ \$10,000; technical co-ordination, 6 months @ \$6670)	\$100,020	-
3. Administrative support	\$10,500	-
4. Travel and per diem	\$22,500	-
5. Initial expert meeting	\$30,000	-
6. Regional expert workshop	\$45,000	\$15,000
7. Regional expert workshop (framework)	\$30,000	\$15,000
8. Project operational costs, communications, supplies, and equipment	\$7,000	-
9. Report preparation, publication and distribution	\$2,000	-
10. In-country support staff	\$10,000	\$10,000
11. Support costs	\$8,200	-
Total	\$298,470	\$40,000

Note: In future activities in this program, it is expected that the costs of the Technical Advisors (Budget item 1) will be reduced and one expert workshop will not be necessary, eliminating Budget Item 5. Thus, any subsequent PDFs would be expected decrease by at least \$60,000, to around \$240,000. Similarly, the PDF costs of regional projects with fewer than 3 components would be reduced proportionally.