

**UNITED NATIONS DEVELOPMENT PROGRAMME
GLOBAL ENVIRONMENT FACILITY**

PROJECT DOCUMENT

Project number:	RER/01/G31
Project name:	Capacity Building for Improving the Quality of Greenhouse Gas Inventories (Europe/CIS region)
Participating countries	Albania, Armenia, Azerbaijan, Croatia, Georgia, Macedonia, Moldova, Mongolia, Slovenia, Tajikistan, Turkmenistan and Uzbekistan
Estimated Starting Date:	May 2003
Duration:	3 years
GEF Implementing agency:	UNDP
Executing agency:	UNOPS
Eligibility:	Non-Annex I Parties
ACC sector and subsector:	Environment
Primary areas of focus/sub-focus:	Climate change
Primary Type of Intervention:	Capacity-Building
Primary Target Beneficiaries:	National climate teams
GEF Programme framework:	Enabling Activity
Primary Areas of Focus/sub-focus:	Climate Change

UNDP and cost co-sharing financing

GEF PDF-B Project	338,000 1,925,000 <u>2,263,000</u>
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Parallel financing:
(Switzerland) 50,000

In-kind contributions
518,696

Total: 2,313,000
Total (incl. in-kind)
2,831,696

2. Summary: The project will initiate a regional programmatic approach developed to build capacity for improving the quality of data inputs to national greenhouse gas inventories, using the good practice guidance of the Intergovernmental Panel for Climate Change for cost-effectiveness. The project will build on the expertise gained during the preparation of the initial National Communications. By strengthening institutional capacity to prepare inventories and establishing a trained, sustainable inventory team, the project will help countries to reduce uncertainties and improve the quality of inventories for subsequent National Communications. This, in turn, will allow countries to improve national strategies for reducing greenhouse gas emissions. The project includes common activities for all participating countries carried out under a regional umbrella; countries may choose the remaining activities to carry out, based on national priorities. The approach has been built on the concept of key sources of emissions; this allows the approach to be replicated for use in other regions with only minor modifications.

On behalf of:	<i>Signature:</i>	<i>Name/Title:</i>	<i>Date:</i>
UNOPS	_____	Juan-Luis Larrabure ENVP Division	_____
UNDP	_____	Ben Slay Director, RBEC Regional Support Center	_____

The Governments of:	<i>Signature:</i>	<i>Name/Title:</i>	<i>Date:</i>
Albania	_____	_____	_____
Armenia	_____	_____	_____
Azerbaijan	_____	_____	_____
Croatia	_____	_____	_____
Georgia	_____	_____	_____
Macedonia	_____	_____	_____
Moldova	_____	_____	_____
Mongolia	_____	_____	_____
Slovenia	_____	_____	_____
Tajikistan	_____	_____	_____
Turkmenistan	_____	_____	_____
Uzbekistan	_____	_____	_____

A. PROJECT CONTEXT

A.1 Global Context: United Nations Framework Convention on Climate Change

1. The overall objective of this project is to strengthen the capacity of participating countries to improve the quality of their national greenhouse gas inventories (GHG) in the context of their commitments as Parties to the United Nations Framework Convention on Climate Change (UNFCCC), as envisaged by Decisions 10/CP.2, 11/CP.2, 2/CP.4, 10/CP.4, 10/CP.5, and Articles 4.1(a)(b) and 12.1(a) of the Convention.
2. Under Decision 10/CP.2 (annex, para. 13), non-Annex I Parties are “encouraged to formulate cost-effective national and, where appropriate, regional programmes aimed at the improvement of local emission factors and appropriate data gathering, and to submit requests for financial technical assistance to the interim operating entity of the financial mechanism of the Convention, in addition to their request for support for the preparation of their initial national communications”.
3. Additional guidance to the Global Environment Facility (GEF)(FCCC/CP/2001/L.4/Rev. 1) identifies funding needs of developed countries. These needs include: ‘supporting the continuation of the “country-team” approach, which enhances the collection, management, archiving, analysis, interpretation and dissemination of data on climate change...’(paragraph c); ‘improving climate change related data collection (for example, local emission and regional factors (paragraph e); and ‘strengthening and where necessary establishing (i) national, subregional or regional databases on climate change. All of these requests to the GEF are addressed specifically in this project.
4. Capacity building in the context of the UNFCCC is also addressed here. For instance, the scope of capacity building includes ‘greenhouse gas inventories, emission database management, and systems for collecting, managing and utilizing activity data and emission factors (paragraph 16.e, FCCC/CP/2001/L.2). Therefore this project responds to this long-standing Convention issue.
5. The improvement of local emission factors and activity data will enhance the quality of the national GHG inventories, which constitute a major component of the National Communications of non-Annex I Parties. Good quality inventories will help with further implementation of the Convention. More accurate inventories will also enable participating countries 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.

A.2 Regional context

6. In the years following the collapse of the Soviet Union in the 1990s, countries in the Eastern Europe and Commonwealth of Independent States (CIS) region suffered dramatic declines in economic output, ranging from 30% to 60% of gross annual domestic product. Most countries in this region have experienced great changes in production and hence emissions in the past decade; a transition in governments created a long period of depression from which some countries have only recently begun to emerge¹. However, these declines are now beginning to reverse in most countries. Such changes will directly impact on GHG emissions in most of the region as energy consumption increases. For instance, following a reduction in emissions in the energy sector for the period 1990-1995 in Turkmenistan, projections show that by 2020, emissions will exceed 1990 levels. Such increases can also be observed in other countries, although at a slower growth rate².

¹ NCSU workshop report, 7-9 April 1999, Baku, Azerbaijan (www.undp.org/cc/workshops1.htm)

² National Communications of Armenia, Azerbaijan, Georgia, Moldova, Turkmenistan, Uzbekistan.

7. Twelve countries are participating in this project: *Albania, Armenia, Azerbaijan, Croatia, Georgia, Macedonia, Moldova, Mongolia, Tajikistan, Turkmenistan, Slovenia and Uzbekistan*. These countries primarily fall into two distinct groups; those from the post-conflict Balkans and those that were formerly part of the Soviet Union. Other historical sub-divisions exist, e.g. the Caucasus sub-region.
8. All the countries have common issues related to improving the quality of national GHG inventories³:
 - ?? They have been unable to create *sustainable institutional and technical capacity* for the implementation of commitments under the UNFCCC. There is a low level of awareness by decision-makers of the importance of inventory preparation; training is needed to implement the new guidance of the Intergovernmental Panel on Climate Change (IPCC).
 - ?? All countries report problems with *institutional arrangements* for compiling, archiving, updating and managing inventory data as specified in the IPCC good practice. Although there was a system of state and branch reporting of data collection in former Soviet countries – especially for energy – this system collapsed in most countries in the 1990s. A number of countries have legislation requiring the government and private sectors to provide statistical data, but difficulties remain.
 - ?? Finally, *uncertainties* in the GHG inventories are estimated as high, although none of the participating countries have reported these in a systematic way. In addition, very few countries have developed local emission factors, relying instead on the IPCC default factors.

A.3 Institutional framework

9. Under the enabling activities, all countries identified a lead agency to co-ordinate the preparation of the GHG inventory (Annex P). Typically, the lead agency resides in a government ministry, such as Nature Protection, Ecology and Natural Resources, Environment, Meteorology and Hydrology, or Statistics. The designation “lead agency” implies that the agency has overall responsibility for the inventory and that the agency carried out most, or all, of the following duties: co-ordination/compilation of national inventory; archiving of relevant national data; periodic updating of the inventory; documentation of selection process for national activity data, emission factors, and other conversion factors; documentation of methods and assumptions used; validation of conversion units and other data; verification of inventory estimates; compilation of the inventory report; and reporting to international bodies. These responsibilities, however, apply only in the context of the Initial National Communication.
10. Each country uses different mechanisms for collecting, managing, updating and archiving data. Data sources within the country are mostly governmental; there are few private companies. Many countries used individual (private) experts from universities, institutes, and NGOs, as well as government agencies, to prepare the inventory (Annex Q). Annex P shows indicates the lead government ministry, which will be responsible for inventory preparation and the national execution of this project.
11. By building on the National Communication process, the national institutional framework for this project will be directly linked to the existing national climate change team responsible for greenhouse gas inventories. The same national institutions from the Initial National Communication will be used in this project. Targeting institutions and relevant national experts as the institution’s representatives will contribute to the sustainability of the project by creating a more permanent infrastructure. The stakeholders for the project are discussed in Section B.3.

³ Sources: UNFCCC and NCSU workshop reports, PDF B questionnaires and follow-up.

12. A regional institutional framework will be established under the project to foster regional and international exchange of information and to provide technical backstopping to the national teams; it will comprise a small co-ordination unit with one full-time and two part-time staff. Regional unit resources will be targeted towards training workshops, technical assistance and a network for information exchange and dissemination through a website and other means.

A.4 Regional priorities

13. Through the PDF B, countries elaborated their national priorities for activity data and emission factors based on a Tier I IPCC good practice method for assessing *key sources of emissions* (Box 1). A *key source category*⁴ is one that is prioritised within the national inventory system because its estimate has a significant influence on the country's total inventory of direct GHG gases in terms of the absolute level of emissions, the trend in emissions, or both. By basing decisions around key sources, any country can allocate its resources in the most cost-effective way to improve inventory quality through reduced uncertainties. This method was not available when the majority of inventories for Initial National Communications were being prepared.

Box 1: Good Practice Guidance and Uncertainty Management in National Greenhouse Gas Inventories

In June 1998, the UNFCCC requested the IPCC to complete its work on uncertainty and prepare a report on good practice in inventory management. The resulting report, *Good Practice Guidance and Uncertainty Management in National Greenhouse Gas Inventories* (GPG), was accepted by the IPCC Plenary in May, 2000.

The GPG provides guidance to assist countries in producing inventories that are neither over nor underestimates, so far as can be judged, and in which uncertainties are reduced as far as practicable. To this end, the GPG supports the development of inventories that are transparent, documented, consistent over time, complete, comparable, assessed for uncertainties, subject to quality control and quality assurance, and efficient in the use of resources.

SBSTA encourages non-Annex I Parties to apply GPG during inventory preparation -- as appropriate and to the extent possible -- as it is recognised that applying GPG could assist these Parties in developing inventories that better reflect their national circumstances (FCCC/SBSTA/2000/L.3).

14. The common approach involves the identification of key sources of emissions through application of the IPCC Good Practice Guidance. This approach is a significant advancement on previous inventory work because it allows the key sectors to be identified and prioritised (quantitatively), according to their contribution to global warming. This means that appropriate procedures, activity data and emission factors can then be targeted for reducing uncertainties in emission estimates in a cost-effective way. This approach was piloted in this project and is now being refined in another project on inventories in West Africa.
15. The inventory assessments identified the key sources of each national inventory, the institutional arrangements for inventory compilation, and the data gaps. This assessment was based on initial National Communications for the Europe and CIS region and national surveys. The assessments were carried out by two regional consultants from Armenia and Kazakhstan, using a bottom-up, country-driven, process in collaboration with the national climate change teams. These assessments are critical for the development of key-source inventories to be carried out under the full project.

⁴ However, identification of key sources relies on emission estimations and can fail to identify potential key sources that are missing or strongly undervalued in the current inventory. This factor will be considered during the project implementation.

16. All participating countries applied the IPCC analysis to identify the key sources of emissions; the example of Uzbekistan is shown in Annex Q and the regional summary of the analysis has been tabulated (Annex R). All activities under this project on activity data will be assessed according to their impact on *regionally-significant* key source categories. The results of the key source assessment were also used to identify regional priorities for emission factor improvement. The choice of emission factors was largely based on those for which there was the highest frequency of countries wishing to carry out work.
17. Countries reviewed the regional summary table at the project finalisation workshop in Croatia and agreed upon a key-source inventory that will include up to four IPCC sub-categories:
- ?? Fugitive CH₄ emissions from oil and gas;
 - ?? CH₄ emissions from solid waste;
 - ?? CO₂ for mobile combustion;
 - ?? CH₄ emissions from enteric fermentation.
- For solid waste and enteric fermentation, countries will focus upon overcoming data issues before assessing ways of improving emission factors. For mobile combustion, the focus is solely data improvements, while for oil and gas fugitive emissions, the focus is an improved emission factor.
18. In accordance with national priorities, not all countries will carry out project activities for all four key sources. A preliminary assessment was made by countries and is reflected in Table 1.

Table 1: National assessment of priorities for improving key sources

Data	Countries	Emission factor	Countries
Mobile combustion	Albania, Macedonia, Uzbekistan, Moldova, Slovenia, Croatia, Mongolia, Turkmenistan, Georgia, Azerbaijan, Tajikistan	Fugitive emissions: Oil and gas	Uzbekistan, Turkmenistan, Georgia, Azerbaijan
Solid waste treatment	Macedonia, Armenia, Uzbekistan, Moldova, Tajikistan, Slovenia, Croatia, Mongolia, Turkmenistan, Azerbaijan, Albania	Solid waste treatment	Armenia, Slovenia, Croatia, Georgia, Macedonia, Moldova, Mongolia
Enteric fermentation	Albania, Tajikistan	Enteric Fermentation	Armenia

19. By limiting the key-source inventory to these four key sources, resources will be targeted to improving the estimates for the sources that account for most (ca. 70%) of the total emissions. The key source inventory will differ from the full inventories of greenhouse gases to be prepared under the future enabling activities. Inventory preparation for these key sources will be carried out under this full project, but will not be repeated in subsequent enabling activity projects. Hence, the GEF funds for the inventories that are eligible under the enabling activities may be allocated to other inventory sectors of national significance or other eligible (non-inventory) activities, consistent with the guidelines for non-Annex I national communications and the GEF guidelines for enabling activities. This is also consistent with Paragraph 33 of the GEF evaluation of enabling activities which specifies that the GEF guidelines should be applied more flexibility with respect to the cost norms and activity matrix.
20. The training package that was developed under the PDF will also be applied under the full project to train two experts in GPG per country, hence building on the PDF outputs. It is assumed that the two

trainers were fully involved in the development of the PDF and the full project, as well as in the process of preparing the national GHG inventory.

A.5 Country ownership

21. *Country eligibility:* All countries that have ratified the UNFCCC, and are eligible for GEF funding through the financial mechanism of the convention, are eligible to participate in this project. However, submission of the Initial National Communication will be a prerequisite. Since the activities of this project will complement (not duplicate) the national projects for Second National Communications, it is envisaged that any country wishing to proceed into their second enabling activity may do so once it has submitted its Initial National Communication.
22. Of the 12 countries that have endorsed this proposal, 11 have submitted their National Communications. The 12th country, Macedonia, has submitted its National Communication to the UNFCCC, but their official submission letter is pending. If Macedonia does not finalise their submission prior to the project start up, they will only be allowed to take part in the training under Component 3 of this project. The rationale for their participation in the training is to ensure that they do not fall behind in the project. However, no additional funding from the regional project will be made available until their National Communication is official.
23. There are three countries in the region that more recently began climate change enabling activities: Belarus, Kyrgyzstan and Malta. These countries could be involved in some project activities, particularly regarding training in GPG, using funding from their enabling activities. Such activities would not be funded by the full project since it has not been endorsed by these countries.
24. *Country driven-ness:* The value of a “bottom-up” approach to capacity building has been recognised by the National Communications Support Unit (NCSU) and the United Nations Development Programme-Global Environment Facility (UNDP-GEF). Participating countries have been actively involved in developing this proposal to encourage ownership, and regional consultants were used to enhance capacity.
25. During 1999-2000, NCSU activities included four workshops on inventories, abatement and vulnerability and adaptation, and National Communications for the Europe/CIS region⁵. Many of the recommendations from those workshops are addressed in this project, such as enhancement of regional co-operation to improve information and data exchange and to harmonise approaches. In particular, four recommendations from the *NCSU Thematic Workshop on Inventories* (Baku, Azerbaijan, 7-9 April 1999) will be addressed under this project:
 - ?? To hold regional information exchange workshops to discuss legal and other aspects to facilitate the data collection in the countries concerned.
 - ?? To develop suitable software to facilitate the systematic collection, management and analysis of the data.
 - ?? To create a web site on inventory preparation with on-line technical assistance.
 - ?? To carry out targeted research to develop regional emission factors.
26. In addition to carrying the key source analysis, a number of outputs were achieved during the PDF phase of the project. All 12 countries completed an extensive questionnaire regarding capacity needs for the inventory process and identified key sources of emissions (Annex R). Two regional experts, from Kazakhstan and Armenia, assessed the national GHG inventories and provided technical

⁵ Workshop reports can be downloaded from the NCSU website at www.undp.org/cc/workshops1.htm

backstopping during the key source analysis. In addition, there will be a full technical review of all inventories prior to the project start-up as a quality control measure. Those countries that have already had NCSU technical reviews of their inventories (paragraph 31) will not require an additional review.

27. The project strategy, which is reflected in the Project Planning Matrix (Annex J) was designed during a regional *Project Development Workshop* (30 July-1 August, Bratislava, Slovak Republic). Workshop participants included national inventory experts, project co-ordinators of climate change enabling activities, international and regional experts from Annex I and non-Annex I Parties, and a representative of the UNFCCC secretariat.
28. The implementation aspects of the project were adopted during a regional consultation workshop held in Zagreb, Croatia, on 26-28 March 2002. The workshop also included an introduction to GPG for fugitive emissions and solid waste.
29. The training package for good practice in national greenhouse gas inventories has undergone wide review and is scheduled for completion by project start-up (Annex T).

A.6 Prior and ongoing assistance

30. *GEF*: All participating countries carried out GEF climate change enabling activities. Eight countries have also received additional GEF funding for Climate Change Enabling Activity Phase II Expedited Financing for (Interim) Measures for Capacity Building in Priority Areas on technology transfer, observing systems and emission factors. Although no country has allocated these funds for emission factor development, should any participating country do so, this work will be linked into the regional project.
31. *NCSU*: Technical assistance has been provided to all participating countries through its Help Desk and through four regional workshops. In addition, Albania, Azerbaijan, Croatia, Macedonia, Tajikistan and Uzbekistan received technical feedback on their national GHG inventories. The NCSU provides these free evaluations of any technical components of a draft National Communication, as one of its technical assistance functions. The evaluations are carried out by a roster of international experts.
32. Table 2 summarises both multilateral and bilateral funding received by countries for their studies.

Table 2: Prior and ongoing assistance provided to countries for inventory preparation (US\$)

Country	Global Environment Facility		Other
	Enabling Activity total	For inventory	
Albania	278,000 + 100,000 (<i>top up</i> *)	60,000	
Armenia	350,000 + 100,000 (<i>top up</i> *)	50,000	
Azerbaijan	324,500 + 97,500 (<i>top up</i>)	85,000	
Croatia	345,000 + 100,000 (<i>top up</i>)	85,000	
Georgia	325,000 + 100,000 (<i>top up</i> *)	76,000	
Macedonia	345,000	50,000	
Moldova	325,000 + 99,500 (<i>top up</i>)	45,000	
Mongolia	--	22,000	US Country Studies Program (\$35,900)
Slovenia	345,000 + 95,000 (<i>top up</i>)	87,000	
Tajikistan	327,000 + 100,000 (<i>top up</i> *)	67,500	
Turkmenistan	350,000	150,000	
Uzbekistan	325,000 + 98,000 (<i>top up</i>)	70,000	
<i>Note:</i> * <i>Top-up refers to Climate Change Enabling Activities Phase II</i>			

B. PROJECT JUSTIFICATION

B.1 Problem(s) to be addressed and the present situation

33. For implementing commitments under the UNFCCC, participating countries will need to create *sustainable institutional and technical capacity*. The national GHG inventory is the cornerstone of the National Communication; most non-Annex I Party inventories have high uncertainties in activity data and emission factors and a number of activity data gaps⁶. More accurate inventories also enable participating countries to identify major sources and sinks of greenhouse gases with greater confidence, and thus to make more informed policy decisions with respect to appropriate response measures.
34. This project intends to build technical and institutional capacity to improve the quality of future national GHG inventories through a regional programmatic approach. The activities outlined in this project (Section E) build on the discussions and recommendations of NCSU thematic and regional workshops⁷,

⁶ FCCC/SBI/2000/15: Second Compilation and Synthesis Report of initial National Communications from Parties Not Included in Annex I to the Convention

⁷ Workshop reports are available on the NCSU website at www.undp.org/cc/workshops1.htm

the UNFCCC Consultative Group of Experts on non-Annex I National Communications workshops⁸, and the UNFCCC workshops on emission factors and activity data⁹.

35. Through active discussions in the regional workshops of the NCSU, 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.
36. The IPCC 1996 *Revised Guidelines* recognise that a range of input data is 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 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. Given resource constraints, selecting national priorities for data collection becomes critical. The application of IPCC GPG ensures that the most efficient use of limited resources.
37. This delineation also implies that the cost of the inventory prepared under the second National Communication is not expected to immediately decrease for countries participating in this project. However, over a longer timeframe of about 5 years or more, the inventory systems that are created should be largely sustainable and the cost of inventory updating should decrease significantly in the longer term. The timeframe would depend on the country's resources, size, and capacity.

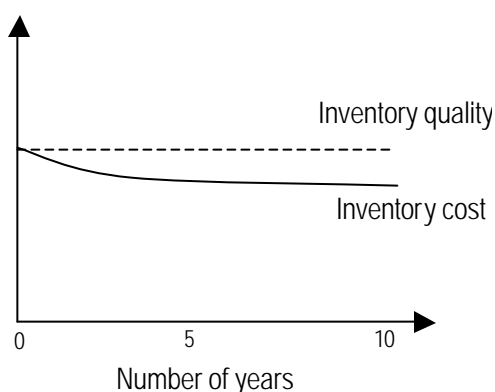


Figure 1: The cost and quality of inventory preparation in sequential enabling activities

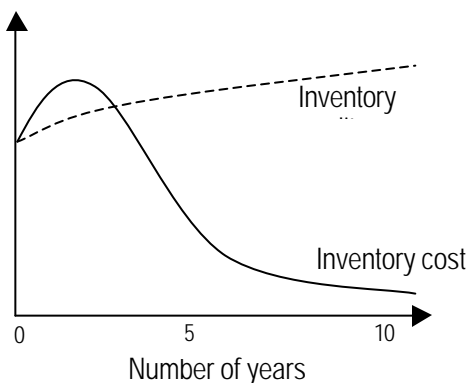


Figure 2: The cost and quality of inventory preparation in sequential enabling activities and with regional project

38. Figures 1 and 2 illustrate this point. Without additional funding through the full project, the inventories of the Second National Communications will be of similar quality to the first. The same uncertainties of estimates will be regenerated. Figure 1 shows qualitatively how the cost of inventory preparation and quality can remain unchanged over time if, each time the inventory is prepared under the enabling activity, the same default data are used, with little gain in cost or quality. Figure 2 shows that with some initial

⁸ FCCC/SBI/2001/INF.1: Report of Inter-regional Workshop of the Consultative Group of Experts on National Communications from Parties not included in Annex I to the Convention,

⁹ UNFCCC Workshops on Emission Factors and Activity Data (16-18 September 1998, Havana, Cuba; 4-6 August 1999, Accra, Ghana)

investment under the full project, the quality of the inventory improves. Gradually the cost of the inventory declines as the process of inventory preparation becomes institutionalised. While these figures are not quantitative, the general trends have been identified, based on extensive discussions with inventory experts.

39. Finally, the investment in infrastructure and technical capacity building will have benefits beyond national GHG inventories; the activity data – and potentially some of the emission factors – can be used for other national conservation and development programmes. Examples of the multiple uses of activity data will be prepared under the awareness-raising activities of the project.

B.2 Expected end-of-project situation

40. *Inventory quality improved:* The project will use a flexible, programmatic approach over its three-year lifetime to respond to the evolving needs of countries. As a result of this project, GHG inventories for future National Communications will be compiled in a sustainable manner; the inventories will be of a higher quality than those prepared for the Initial National Communications.
41. *Sustainable inventory process created:* Several activities have been identified under Immediate Objective 2 to ensure that the inventory process can become permanent. One activity relates to strengthening relations with national Ministries to ensure that countries are proactive in creating new relations within government, particularly for “win win” joint activities such as utilising inventory data for other national activities. An awareness-raising campaign will be developed under the project in English and Russian. Each country will have a translation budget that can be used to translate the campaign into the national language. The campaign will promote the importance of an institutionalised inventory process beyond the national GHG inventories to policymakers. Outreach activities to potential donors are also proposed.
42. *Long-term strategies to improve inventories developed:* Using the procedures outlined in the GPG, countries will create quality assurance and quality control plans, along with a prioritised strategy for improving inventory quality in the short and long-term.
43. *Regional and international information exchange network established:* A regional database of inventory experts will be compiled and a web site established to enhance exchange of data and information. Country solutions will be compiled and disseminated both within the region, and to a sister project in West Africa, to allow countries to benefit as quickly as possible from the lessons learned. Linkages to regional and international activities will be established and documents translated as necessary. Linkages to related international and regional activities will be established through a Technical Advisory Panel.
44. *Emission factors improved and disseminated:* Assumptions and methods for emission factors will be documented to increase their reliability and up to three emission factors will be improved or developed to reflect appropriate regional circumstances (see Table 1). However, new methods for estimating emission factors will not be developed under this project. The emission factors will be also disseminated through the IPCC emission factor database.
45. *Data collection and management improved:* For the selected key sources (Table 1), activity data gaps will be reduced and data collection strategies will be improved. The national arrangements for collecting, managing and archiving data in each country will be documented and described for a given sector of the national inventory. National arrangements for data collection and application of inventory methods will be archived so that the inventory can be updated on a regularly basis, as required under Article 4.1a of the UNFCCC. Issues to be addressed are likely to include: interagency co-ordination for the collection, management, archiving and quality control of national data, interagency mandates,

roles and responsibilities for inventory preparation; peer review of the national data; state legislation for data collection.

46. *Number of trained experts increased:* Two training workshops in IPCC GPG will be held under the project; one during the start-up phase on incorporating GPG procedures into national arrangements and one in the third year on quality assurance and quality control procedures. Using the integrated training package that is under development, two experts from each country will be trained in GPG. These experts will then become trainers for their national teams. It is assumed that the two trainers were fully involved in the development of the PDF and the full project, as well as in the process of preparing the national GHG inventory. At least eight inventory experts will be trained at the national level in this way¹⁰.
47. *In-country technical peer review system established:* To develop capacity, every country will prepare one key-source inventory under the project, to be reviewed by another country within the region. The key-source inventories might also be presented at regional workshops for additional comments from regional and external experts. Other aspects of the in-country peer review mechanism will be finalised under the full project.

B.3 Stakeholder participation

48. Several mechanisms have been built into the project to ensure maximum stakeholder participation which are outlined in Section E. These include workshops, project steering committees, an awareness-raising campaign targeting policy-makers and data providers, the establishment of a regional exchange information network, and linkages to the international expert and donor communities.
49. *National inventory team:* As described earlier, national experts have been fully involved in the development of this project. These experts will be trained in GPG and form a core part of the team to carry out project activities. The national inventory team leader will act as the national co-ordinator for this project. National sectoral experts and representatives of national stakeholder institutions who worked on the first national GHG inventory will also be involved through institutional sub-contracts or, in select cases, through personal contracts with experts. In this way, the project will build upon existing technical capacity.
50. *Lead national institution:* All countries have identified a lead agency for inventory preparation (Annex O). This arrangement will help to build institutional capacity and to ensure that the process established here is sustainable beyond the lifetime of the project.
51. *National institutions:* Each country has identified institutions within each sector, e.g. energy, waste, etc., from which inventory experts can be drawn, building on the existing framework established under the enabling activity (Annex O). Awareness-raising activities targeting these institutions will help strengthen the inventory preparation framework. Active input from these institutions will be sought throughout the project cycle.
52. *National project steering committee:* To raise awareness and enhance co-operation with data provision agencies and policy-makers, each country will establish a national project steering committee, or utilise the National Climate Committee established for the enabling activities where this body or one of its subcommittees serves as the Project Steering Committee. The committee will comprise the National Project Co-ordinator of the climate change enabling activity, the National Inventory Team Leader, a UNDP Country Office staff member to observe and advise on UNDP rules, regulations and

¹⁰ As a national activity not funded under this project.

procedures, and representatives of appropriate government Ministries and data provision agencies, including the private sector. The final composition of the Steering Committee will be identified during the project start-up phase.

53. *Regional and international outreach:* The regional project steering committee will include representatives of the UNDP/NCSU and the Executing Agencies. A Technical Advisory Panel will also be established with representatives of the UNFCCC, the IPCC Inventory Task Force Bureau, and appropriate Annex I and non-Annex I experts to encourage international and in-house linkages to appropriate projects, e.g. the Capacity Development Initiative. Outreach will be sought with other relevant regional activities. Linkages to Annex I Parties have also been built into the project framework. These Parties include economies in transition, which can provide examples of appropriate regional approaches, and other Parties, which can provide in-kind expertise or financial support.

C. PROJECT STRATEGY

54. The goal of this project is to build on the inventory work undertaken for first National Communications in preparation for Second National Communications. Technical and institutional capacity will be sustained. As a result of this regional inventory project, GHG inventories prepared under enabling activities for subsequent National Communications will be of a higher quality than those prepared for the initial national communications.
55. A programmatic approach to building capacity has been developed for this project, as reflected in the Project Planning Matrix (Annex K). The approach, while regional in design, is flexible enough to meet national needs. That is, aside from certain common activities, countries are free to choose to participate in some or all of the remaining project activities, consistent with national priorities. This gives countries the opportunity to focus allocation of resources on national arrangements (Output 1) or emission factors (Output 4), as appropriate.
56. In the start-up phase of the project (2-3 months), national teams comprising at least 10 experts will have training in the IPCC's good practice guidance for inventory preparation¹¹. This training will consist of reinforcing the notions of prioritising improvements to the inventory based upon key source analysis and identifying appropriate methods for estimating emissions for the selected key sources. This training will provide the basis for creating a sustainable institutional framework; countries will develop long-term national strategies to improve inventory preparation and identify the national institutions and organisations to be targeted for long-term involvement in the inventory process. A regional website, expert database and information exchange network will be established for information dissemination.
57. For the remainder of year one, countries will focus on strengthening national arrangements for compiling, archiving, updating and managing GHG inventories. In particular, countries will improve their data collection strategies and identify methods for reducing data gaps. A regional workshop will be held to identify legislation and compliance measures for data collection. The rationale for commencing these activities prior to beginning work on emission factors is that improved activity data can often improve emission estimates sufficiently that the need for a new emission factor is reduced. The selection processes will be described and documented. A regional workshop will be held to exchange experiences on overcoming barriers to obtaining data and overcoming data gaps. The results will be compiled into a document that will be disseminated to all countries.
58. In the second year, countries will begin to undertake activities on improving emission factors and methods. The first step will be to improve the reliability of existing emission factors by documenting

¹¹ That is, two experts trained in GPG at the start-up workshop, who will train eight additional experts.

the selection processes, methods and assumptions. Any existing national emission factors and methods for estimating emission factors will be disseminated within the region. Countries will begin to develop up to three emission factors that have been identified as regional priorities. Not all countries will work on the development of every emission factor; the results will be shared between countries using the regional exchange network.

59. At the regional level in the second year, an awareness-raising package will be developed. There will be two audiences for the package. Firstly, national policy-makers and data providers will be targeted, to strengthen government and institutional support for inventory procedures. Secondly, donors who could assist in financing regional activities after the end of this project. Relations with regional and sub-regional institutions will also be strengthened as part of the outreach activities. Results will also be exchanged with the West African sister project. A side-event at the UNFCCC Ninth Conference of the Parties will be held to disseminate interim results of the project.
60. In the third year, work will continue on improving emission factors. The reliability of the emission factors will be systematically documented. Each country will prepare a key source inventory and a regional peer review system will be established in which each country reviews the key source inventory of another country¹².
61. In the last quarter of the project, there will be a GPG training workshop in quality analysis and quality control (QA/QC) procedures. Countries will develop QA/QC plans that can be put into place for Second National Communications. Countries will also archive all activity data and emission factors obtained under the project and develop a manual of procedures for preparing a national GHG inventory. This manual is essentially the national blueprint for the inventory.

D. DEVELOPMENT OBJECTIVE

62. The overall objective of this project is to build technical and institutional capacity to enable a significant number of countries to improve the quality of activity data and emission factor inputs to their national GHG inventories in the context of National Communications.

E. IMMEDIATE OBJECTIVES, OUTPUTS AND ACTIVITIES

E.1 Immediate objectives, outputs and activities

Immediate Objective 1: Strengthened institutional arrangements for compiling, archiving, updating, and managing greenhouse gas inventories

63. Only five of the 12 countries participating in this project have inventory systems in place. Under this component, countries will begin a systematic approach to strengthen sustainable data collection systems, incorporating GPG principles. Only activities for regionally-significant key source categories will be undertaken. Some of the significant outputs from this component will be: 1) compilation document of country solutions to overcoming barriers to data collection, 2) application of GPG methods to document and describe inventory system, and 3) establishment of a regional information exchange network and web site.

Output 1.1: Data collection strategy improved¹³

¹² That is, an inventory of 3-4 key sources.

¹³ Data collection will be a national activity not funded under this project.

64. This output focuses on inventory data gaps for which data exists, but for which there are barriers to collection. Using a top-down approach, the strategy is to first identify available data sources at the international and regional levels. If national data exists that was not utilised for the initial National Communication, countries will then identify barriers to collection and solutions for obtaining this data.

Activities:

- 1.1.1 Identify data gaps
- 1.1.2 Identify sources of available data from prior and ongoing international and regional projects
- 1.1.3 Identify prior and ongoing national sources of existing data, e.g. Taxation Department, Customs
- 1.1.4 Identify barriers to obtaining available data in key source categories
- 1.1.5 Compile country solutions (practices) to overcoming barriers
- 1.1.6 Utilise country solutions (practices) to overcoming barriers
- 1.1.7 Check conversion of units and validate data compiled

Output 1.2: Data gaps reduced

65. This output focuses on compilation of data where available sources cannot be identified. Various approaches and methods for extrapolating the data will be considered.

Activities:

- 1.2.1 Identify data that must be compiled/developed to fill gaps
- 1.2.2 Identify methods/approaches to overcome data gaps, using GPG, e.g. compare inventories across years in order to identify trends in emissions and removals, use interpolation/extrapolation methods, etc.
- 1.2.3 Compile or develop country solutions/methods for overcoming data gaps in key source categories
- 1.2.4 Check conversion of units and validate data compiled

Output 1.3: Inventory system documented and described

66. Documentation will be prepared throughout the project lifetime in conjunction with activities under Outputs 1.1, 1.2, 4.1, 4.2 and 4.3. The documents may be translated from national languages into Russian and English for dissemination as training tools if deemed appropriate.

Activities:

- 1.3.1. Archive relevant data (e.g., activity data, emission factors, conversion factors)
- 1.3.2. Document the selection process of national activity data and related parameters used in the inventory preparation process
- 1.3.3. Document the methodologies and assumptions used
- 1.3.4. Document the data collection methods of data providers
- 1.3.5. Elaborate a national manual of procedures to prepare the inventory

Output 1.4: Regional information exchange network established

67. The regional information exchange network will be critical to the project's success, allowing improved information flow on national experiences to overcoming barriers to data collection, as well as exchange of emission factors, local methods, and activity data. This will also ensure that both successes and failures can be quickly disseminated as lessons learned. Links to other international and regional efforts on data collection and emission factors will also be improved, e.g. the IPCC Emission Factor Database. A regional exchange workshop will be held on legal aspects of data collection under Activity 1.4.2. The in-country technical peer review mechanism is a capacity-building exercise whereby each country will prepare a key source inventory that is technically reviewed by another country within the region. A parallel review could be carried out by an international expert for

verification purposes if desired by the country. The final aspects of the peer review mechanism will be developed by the Regional Project Manager in conjunction with the countries.

Activities:

- 1.4.1 Establish regional web site
- 1.4.2 Create regional database of national inventory experts
- 1.4.3 Identify needs in legislation and compliance measures for data collection and interagency co-ordination
- 1.4.4 Disseminate regional and international experiences in legal and other regulatory approaches (e.g. voluntary agreements) to overcoming barriers to data collection
- 1.4.5 Establish an in-country technical peer review mechanism

Immediate Objective 2: Sustainable Inventory Process Created

- 68. A long-term strategy will be developed for ensuring sustainability of the inventory process. The Regional Project Manager will oversee development of an awareness-raising campaign on the importance of institutionalising the inventory process and on the multiple benefits of data collection, targeted at policymakers and data providers. The regional campaign will be modified and translated for national circumstances. A side-event with Ministers at a COP-9 will also be planned under the campaign. In addition, outreach to Annex I Parties will be carried out. Transition economies can lead by example in providing country solutions to overcoming barriers, other developed countries may offer in-kind support such as emission factor development or training. Potential donors will be identified to mitigate against the risk of the awareness-raising campaign failing.
- 69. All the activities under Immediate Objective 2 will be carried out in conjunction with all countries.

Output 2.1 Sustainable inventory team

Activities:

- 2.1.1 Develop long-term in-country programme to improve inventory
- 2.1.2 Carry out awareness-raising campaign targeting policy-makers and other stakeholders on the importance and benefits of data collection, inventory quality, and reporting commitments to the UNFCCC
- 2.1.3 Identify linkages to Annex I Parties
- 2.1.4 Identify appropriate end-of-project financing e.g. multilateral, bilateral, private sector

Immediate Objective 3: Enhanced technical capacity for preparing national inventories

- 70. It is envisaged that, at the end of the project, technical capacity in the region will be improved. In the interim, the NCSU and the project's Technical Advisory Panel will provide a major role in technical backstopping under this component, as well as providing linkages to international activities.
- 71. All the activities under Immediate Objective 3 will be carried out in conjunction with all countries.

Output 3.1: Number of qualified national inventory experts increased

- 72. The *IPCC 1996 Revised Guidelines for National Greenhouse Gas Inventories* and the *IPCC Good Practice Guidance and Uncertainty Management in National Greenhouse Gas Inventories* have been disseminated through the NCSU network to all countries participating in the project. An integrated training package will be finalised by project start-up and translated into Russian. This package will be used by the two national experts who assume the role of trainers of the national inventory team¹⁴.

¹⁴ Training of national inventory team is considered a national activity not funded under this project

Activities:

- 3.1.1 Train (trainers) in IPCC Good Practice applications
- 3.1.2 Distribute supporting materials¹⁵ and education kits
- 3.1.3 Develop an interactive CD-Rom/internet training module

Output 3.2: IPCC Good Practice applied to extent needed

73. All countries participating in the project will undertake the activities under this output. While activities 3.2.1 and 3.2.2 have been carried out under the PDF B, they are included here, as they are essential to the programmatic approach that has been developed. Activities 3.2.5 and 3.2.6 will take place in the final phase of the project. One training workshop will be held during the project finalisation phase in to develop the quality analysis and quality control plan and train in GPG for uncertainty reporting.

Activities:

- 3.2.1 Key sources identified through Tier 1 Assessment
- 3.2.2 Comparison of key source-specific assessments
- 3.2.3 Identify appropriate methods source by source, using GPG decision trees
- 3.2.4 Identify areas where recalculations are necessary, and plan strategy to ensure consistency
- 3.2.5 Prepare quality analysis and quality control plan
- 3.2.6 Compile key-source inventory for peer review

Immediate Objective 4: Improved methodologies and emission factors

74. Countries have identified three regionally-significant emission factors needing improvement or development, according to key source categories: fugitive emissions from oil and gas, solid waste treatment, and enteric fermentation. The emission factors will be improved, using methods consistent with IPCC guidelines. (It is not anticipated that any new methods for estimating emission factors will be developed under this project.) Training workshops will be held as part of this development process. The actual approaches for improving the emission factors will be finalised in the first year of the project, once activities on national arrangements are well underway. The project will encourage harmonisation of approaches to emission factor improvement to allow improved comparisons between countries. National emission factors that have already been developed (e.g. CO₂ emissions from arable soils by Moldova; annual growth of biomass by Armenia) will also be reviewed for feasibility as regional emission factors. Through the regional exchange network (activity 1.4), the results of Outputs 4.2 and 4.3 will be disseminated to the IPCC emission factor database.

Output 4.1: Increased reliability of emission factors

Activities:

- 4.1.1 Document the selection process of emission factors and other conversion factors used in the inventory preparation process
- 4.1.2 Document the methodologies and assumptions used

Output 4.2: Improved and/or new emission factors for key sources

Activities:

- 4.2.1 Compile local emission factors within region
- 4.2.2 Compile emission factors for older technologies (to reduce data gaps)
- 4.2.3 Disseminate local emission factors within region
- 4.2.4 Improve links to international emission factor databases (e.g. IPCC, International Energy Agency)

¹⁵ Developed within this project and/or already available at different international organisations

- 4.2.5 Prioritise emission factors for improvement using key source assessment and tools such as sensitivity analysis
- 4.2.6 Improve and/or develop up to 3 regionally-significant emission factors, consistent with IPCC guidance on methodologies

Output 4.3: Methodologies to estimate emissions improved using national and/or regional approaches

Activities:

- 4.3.1 Compile local methodologies within region
- 4.3.2 Disseminate local methodologies within region and externally (e.g. IPCC emission factor database), consistent with IPCC guidelines and standard units
- 4.3.3 Assess the suitability of disseminated methodologies for national use, applying GPG

F. RISKS AND SUSTAINABILITY

75. *Risks:* The main risk of this project is that governments will not have funds to sustain the national arrangements, inventory team and regional information exchange network once the project ends. One assumption is that the activities undertaken in Immediate Objective 2 will sufficiently mitigate this risk, along with the gains obtained from applying GPG. These activities include:
- ?? *Awareness-raising campaign:* The Regional Project Manager will produce a regional campaign to successfully engage policymakers and data providers to understand 1) the importance of data collection for national commitments under the UNFCCC, 2) the benefits of institutionalising the inventory process, and 3) the multiple benefits of data collection and emission factor development, beyond national GHG inventories. A component of the campaign will allow countries can make modifications to reflect national circumstances. Given the crucial role of this activity, a media/public relations consultant will assist with the campaign, which will be translated into national languages to maximise dissemination potential. A side-event at COP-9 or 10 for Ministers is also proposed.
 - ?? *Outreach to potential donors:* Linkages to Annex I Parties will be developed to learn from their experiences on overcoming barriers. Assumption that continued economic growth and therefore increasing emissions.
 - ?? *GPG:* will improve procedures for compiling, archiving, managing and updating activity data in the most cost-effective manner. The inventory will be documented and validated; national arrangements will be strengthened.
76. *Sustainability:* A prerequisite for the national inventory team leader hired under this project, in correspondence with UNDP rules and regulations, will be prior involvement in the preparation of the inventory for the first National Communication. This ensures that this project builds on past experience. Providing two experts with roles as trainers of the national team encourages an exponential increase in trained personnel. Countries have committed to training eight additional experts at the national level within the lifetime of the project¹⁶.
77. If financial resources are not made available at the end of the project to sustain the Regional Exchange Network, the website could be hosted by either the NCSU or the UNDP SURF based in Bratislava. The SURF will play a key role in disseminating emerging best practices through UNDP's global

¹⁶ As a national activity not funded under this project.

information network. However, the awareness-raising campaign should also target activities being undertaken by the World Bank and other IFIs, in order to identify means of developing sustainability.

78. Countries will contract appropriate national institutions, and in select cases, national experts, to carry out the project activities for each sector, e.g. energy, waste. These institutions, which can take the form of individual institutions, agencies, universities, NGOs, or other recognised legal entities, have been identified, and will be targeted for awareness-raising and institutional strengthening. This will help mitigate against any changes in the inventory team during the project lifetime by strengthening the institutional framework, while laying the basis for sustainable institutional practices once the project has ended.
79. The documentation and description of national arrangements is essential for ensuring sustainability and transparency of inventory procedures, even should personnel change. Under the project, countries will develop a long-term strategy for improving the national inventory, a quality assurance and quality control plan, and a manual of procedures. These documents will provide participating countries with blueprints for future work.
80. *Replicability*: As explained under Project Strategy, the Project Planning Matrix reflects a regional programmatic approach that can be applied to any region, subject to consideration of sector-specific issues and modifications to reflect regional circumstances.
81. One important project output is the compilation of national solutions for overcoming barriers to data collection and emission factor improvement and development. These “lessons learned” – both successes and failures -- and emerging best practices will be disseminated through the regional information exchange network. Many of the issues that the region faces in the context of inventory preparation will also be of interest to other non-Annex I Parties. Therefore dissemination of results through the UNDP/NCSU global network of climate change teams, the UNDP SURF based in Bratislava, and to other international arenas, will be encouraged.

G. INSTITUTIONAL ARRANGEMENTS

82. During the project development, countries called for a decentralised structure in order to maximise national capacity development. There was minimal support for establishing a regional centre of excellence, although the use of regional experts was requested where possible. The institutional arrangements below reflect this arrangement.
83. UNDP will serve as the GEF Implementing Agency to strengthen and develop linkages with other relevant projects, such as enabling activities, the West African sister project, and the Capacity Development Initiative. UNOPS will serve as Executing Agency, with a contract to the REC in Szentendre, Hungary, for the regional project activities outlined below. The RBEC Regional Support Centre in Bratislava will serve as the lead Country Office through its Liaison Countries Unit.

International level

84. A Technical Advisory Panel will have supervisory, technical and quality control roles (terms of reference, Annex T) and will be co-ordinated by the NCSU. The Panel will include representatives from appropriate regional and international bodies (e.g. IPCC National Greenhouse Gas Inventories Programme Technical Support Unit, UNFCCC, Regional Environment Center), along with regional and international experts.

Regional level

85. A Regional Co-ordination Unit (RCU) will be established to implement the project on a day-by-day basis and to ensure that the expected outputs are completed on time. The RCU will provide professional guidance to both project stakeholders and governments during the period of execution. The unit will be based at the Regional Environment Center for Central and Eastern Europe (REC), in Szentendre, Hungary. The Project Manager (PM) will be hired through an international and transparent process, according to UN rules and regulations. As the co-ordination role of the Project Manager is crucial to the success of this project, the NCSU will carry out a supervisory role of the Manager and will be consulted during the hiring process. The RCU will also comprise the part-time posts of one project assistant and one information technology expert¹⁷.
86. All staff contracts will terminate at the end of the project unless non-GEF funds are found. There will be no possibility of contract extensions with the GEF under any circumstances.
87. The REC was selected to execute the regional activities for several reasons. The Centre: 1) meets and exceeds requirements for capacity as an NGO executing agency; 2) has experience with GEF regional projects; 3) carries out complementary work with Annex I countries in Central and Eastern Europe and offers a network of Annex I Economies in Transition countries; 4) offers on-site conference facilities, multi-lingual web design and support services, and in-house translation and editing capabilities; and 5) has a decade of experience in resource mobilisation from many different donors.
88. International and regional consultants who are recruited under the project to provide technical assistance will report to the Project Manager, as specified in their Terms of Reference (Annex T). Priority will be given to recruitment of experts from within the region where possible. International and regional experts will also form part of the workshop resource teams. In addition to these experts, the Technical Advisory Panel will play an important role in technical backstopping, particularly on GPG and training activities.
89. A regional Project Steering Committee (PSC) will be established to supervise project execution (Annex U). It is envisaged that the PSC will meet by teleconference or email up to four times a year, or during the margins of regional exchange workshops. The documentation to be provided to the PSC for these teleconferences is described in Section H. The PSC will be comprised of:
- ?? Project Manager
 - ?? UNDP-GEF representatives (NCSU and/or RBEC regional co-ordinator)
 - ?? UNDP Regional Support Centre (e.g. SURF representative)
 - ?? Executing Agency (UNOPS) and REC representative
 - ?? Four national focal points (either inventory team leaders or climate change enabling activity project co-ordinators, with representation changing on an annual rotating basis).

National level

90. The RBEC Regional Support Centre in Bratislava will serve as the lead Country Office through its Liaison Countries Unit. The selection of the RBEC Regional Support Centre as the lead office was based on several reasons: 1) proximity to the REC (good rail access and 2.5 hours by car); 2) co-location with the UNDP-GEF regional co-ordinator for energy and climate; 3) prior experience with regional GEF projects; 4) prior experience with GEF projects using special NGO participation.

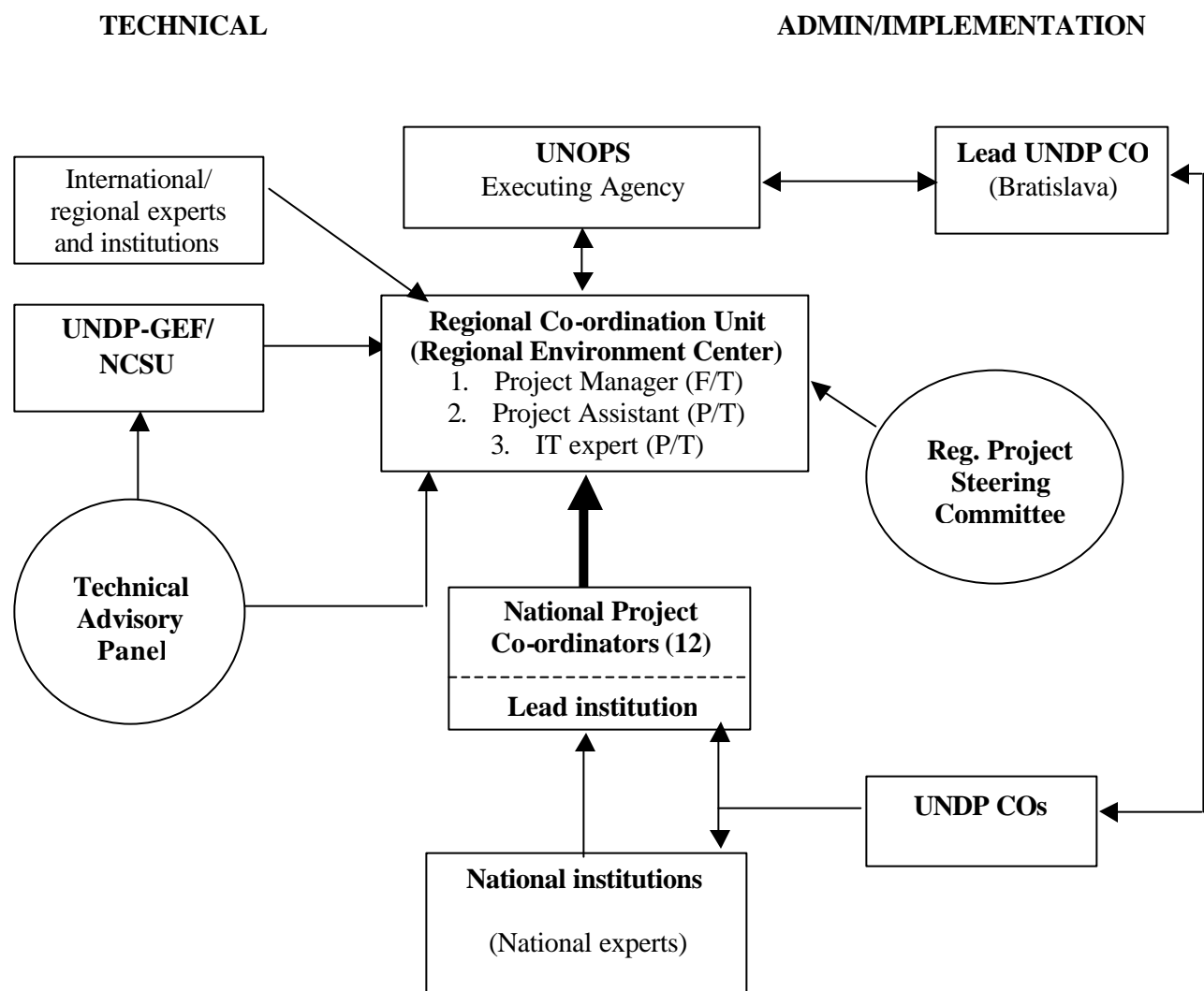
¹⁷ The suitability of the part-time arrangement will be reviewed at the end of the first year of the project.

91. As the Lead office, Bratislava will assist in the recruitment of the Project Manager, and liaise with UNOPS, the REC, UNDP-GEF, and UNDP country offices during all stages of project implementation. UNOPS will oversee all financial reporting and monitoring and evaluation of the project.
92. Within each country, a national focal point will be designated to supervise the project. One prerequisite is that the expert must have been substantially involved in preparing the inventory for the First National Communication. It is envisaged that this person will be either the national inventory team leader or the project co-ordinator of the climate change enabling activity (CCEA), and based at the national institution that was responsible for the preparation of the initial National Communication. Within this project document, this focal point position is referred to as the National Inventory Team Leader.
93. The national inventory team leader will be responsible for overseeing the execution of national project activities, reporting on national project activities to the Project Manager. He/she will ensure that there are linkages between this project's outputs and other relevant national projects, particularly the climate change enabling activities (top-ups, second National Communication). He/she will also be responsible for outreach and co-ordination activities with government institutions and Ministries, universities and other relevant stakeholders. Draft terms of reference can be found in Annex T; these may be refined by each participating country to appropriately reflect national circumstances. The managerial duties of the national inventory team leader are estimated at 23 working days in total. The technical and supervisory aspects are estimated at 45 working days in total.
94. Where the climate change enabling activity project co-ordinator is funded from the enabling activity, he/she cannot hold a full-time contract under the top-up and/or Second National Communication and hold a part-time contract under the regional project. In these cases, the national inventory team leader would be hired part-time to manage the regional project¹⁸. The CCEA project co-ordinator would be hired full-time under the top-up and/or Second National Communications. Where the climate change enabling activity project co-ordinator is funded by government, countries can divide the duties outlined in the Terms of Reference (Annex T), according to their needs. That is, the climate change enabling activity project co-ordinator may carry out the managerial duties of the regional project as an in-kind contribution to the project, while the national inventory team leader carries out the technical and supervisory duties. However, if the climate change enabling activity project co-ordinator has severe time constraints, it may be preferable to delegate full responsibility to the national inventory team leader to manage the regional project. In either case, it is expected that the national inventory team leader and the climate change enabling activity project co-ordinator will ensure close co-ordination between all enabling activity projects. No project staff can be simultaneously employed by government, in line with UNDP rules and regulations.
95. Each national inventory team leader will identify national institutions to carry out project activities, according to the national workplans and conforming to national priorities, in consultation with the Project Manager. UNOPS will contract the national institutions (individual institutions, agencies, universities, NGOs, or other recognised legal entities). In select cases, specific national experts may carry out project activities. Terms of Reference for the national institutions can be reviewed by the Project Manager, if requested. The national inventory team leader and the UNDP will be responsible for ensuring the quality and timeliness of the project outputs, and for reporting these outputs to the Project Manager. Additional external technical assistance from regional and international experts can be requested through the Project Manager.

¹⁸ The national inventory team leader can still be hired part-time to oversee the inventory preparation for the Second National Communication, as long as the total sum of his or her time does not exceed 100%.

96. The national inventory team leader will also identify one national expert to participate in the peer review of the key source inventories to be carried out under Activity 3.2.6. The mechanism of review and appropriate Terms of Reference will be developed by the Project Manager.
97. In each country, a national Project Steering Committee will be created that includes the National Project Co-ordinator of the Climate Change Enabling Activities, the National Inventory Team Leader, and a UNDP Country Office staff member to observe and advise on UNDP rules, regulations, and procedures. The national Committee should also include representatives drawn from appropriate government Ministries and other data providers, such as the private sector (see Annex O for potential committee members). The final composition of the Steering Committees will be identified during the project start-up; the National Climate Committee already established under the enabling activity could fulfill the steering committee role.
98. Figure 3 is an indicative organisational chart of the institutional arrangements.

Figure 3: Indicative organisational chart of project implementation arrangements



Linkages to regional and international initiatives

99. During project implementation, a high level of co-ordination will be carried out through the Technical Advisory Panel with relevant institutions and organisations to ensure that the project activities are distinct and fully complementary to other international, regional and national initiatives.
100. An especially high level of co-ordination is expected with the IPCC National Greenhouse Gas Inventories Programme, the inventory sub-group of the UNFCCC Consultative Group of Experts on non-Annex I National Communications, the GEF Capacity Building Initiative and Phase II Climate Change Enabling Activities and Second National Communications.
101. Other potential synergies have been identified with projects and plans of the: United Nations Environment Programme, United Nations Institute for Training and Research, World Bank, Organisation for Economic Co-operation and Development, European Community and PHARE, United States Environmental Protection Agency, Canadian International Development Agency (Central and Eastern Europe Branch), World Summit on Information Society, and the Hellenic Ministry of Environment, Spatial Planning and Public Works. These partnerships were established under the PDF B and will be strengthened under this project.
102. It is important that the project benefit from other activities being carried out in the region, especially those that could assist with long-term sustainability. The project should have outreach to the World Bank and other IFIs, and also utilise the REC's donor knowledge.
103. As well as the NCSU "*Training Tools for Good Practice Guidance and Uncertainty Management in National GHG Inventories*" under development, several other resources have been identified that could feed into project activities. These include:
 - ?? *INFRAS/BUWAL*¹⁹, Switzerland: Database tool for comparative plausibility analysis of GHG inventory data;
 - ?? *European Commission*: Taskforce for Emission Inventory and Projections guidebook;
 - ?? *CENef/WWF/PNNL*²⁰: Training materials developed on inventory preparation and reporting. Also translating the GPG into Russian.Under this project, all essential documentation will be translated between English and Russian, as appropriate.

H. MONITORING, EVALUATION AND DISSEMINATION

104. The regional Project Steering Committee (PSC) will be responsible for monitoring and supervising project implementation as a whole (Terms of Reference, Annex T). The PSC will meet on a quarterly basis to review the performance of the project. These meetings shall take place by teleconference and/or email, or during regional exchange workshops. The Project Manager may convene 1-2 additional teleconferences during the start-up phase of the project, if required.
105. Each national inventory team leader will prepare a progress report, revised workplans and a financial report on a quarterly basis and submit these to the Project Manager prior to the PSC meetings. The UNDP country offices should be copied, for information. Disbursement of the subsequent installments of funds through UNOPS will be subject to the final approval of the national reports by the Project Manager.

¹⁹ Bundesamt für Umwelt, Wald und Landschaft, Switzerland

²⁰ Russian Center for Energy Efficiency (CENef)/World Wildlife Fund (WWF)/Pacific Northwest National Laboratory (PNNL)

106. Overall responsibility for project management and reporting shall lie with the Project Manager. The Project Manager will circulate a synthesis of the national progress reports, and a quarterly progress report and revised workplan for regional activities to the PSC prior to meetings. The monitoring and evaluation duties of the Project Manager will be critical to the success of the project and will be subject to supervision by the UNDP/NCSU.
107. International and regional consultants who are recruited under the project to provide technical assistance will be subject to the approval of the TAC and the NCSU.
108. In line with UNDP procedures, the project will be subject to an annual Tripartite Review (TPR). The PSC will decide on the representation of the Government at the tripartite reviews. The Project Manager shall submit an Annual Project Report (APR) for the tripartite review meeting at least 2 months in advance to allow sufficient review time. Additional performance reports may be requested, as necessary, during the project.
109. A Project Terminal Report will be prepared for consideration at the terminal tripartite review meeting. It shall be prepared in draft sufficiently in advance to allow review and technical clearance by the Executing Agency at least four months prior to the terminal tripartite review.
110. Two external, independent evaluations of the project will be conducted; at mid-term and at the close of the project. The end-of-term project should assess the outputs produced, their impacts, and the lessons learned.
111. In line with GEF procedures, the project will be subject to an annual Project Implementation Review (PIR). The Project Manager will prepare a draft PIR report and formulate recommendations for adjustment of strategies and activities, where necessary.
112. Financial auditing will be carried out according to UNDP rules and regulations.
113. The Executing Agency, the REC and the UNDP's extensive experience in monitoring regional projects will be drawn upon to ensure that project activities and outputs are monitored and properly documented. The planning matrix of the project (Annex J) includes indicators to assist in the monitoring and external evaluation. Such indicators will allow, by means of established verification, the implementation of a final evaluation of the project.
114. A number of national and regional documents are being produced under the project. These will be disseminated widely to key stakeholders within the region to and to relevant international bodies (see paragraphs 58 and 59). Awareness-raising activities identified under the project will directly contribute to these efforts. Any results of the project that could be beneficial to other developing countries will be disseminated using the UNDP SURF and the NCSU networks that are already in place. The Project Manager should also provide annual reports to any UNDP-BDP Knowledge Management network that is established.
115. It is worth noting that, among the specified activities of the project, the implementation of an awareness-raising campaign is considered. The objective of the campaign is to publicise, to targeted policymakers and stakeholders, the importance of the inventory process. The establishment of a regional network will guarantee wide dissemination of both data and lessons learned, as they are substantiated. The project will make every effort to identify both successful and unsuccessful experiences so that they can be learned from quickly. Linkages to international and regional initiatives have also been identified under the project.

I. PROJECT FINANCING

Inputs

116. The cost of this project has been estimated at \$US 2.832 million in total, of which \$2.313 million is cash and \$518,696 is in kind. The GEF is asked to contribute costs of \$2.263 million (including the PDF B of US\$ 338,000).
117. The Swiss Government is providing parallel financing of US\$50,000 under the project GLO/01/G32 for the further elaboration of the *“Training Tools for Good Practice Guidance and Uncertainty Management in National Greenhouse Gas Inventories”*. This funding will be used to test the GPG training tools at the project start-up workshop.
118. All 12 Governments are strongly committed to the implementation of the project. Each Government will provide necessary staff time and facilities with a view to ensure that the national co-ordinating mechanisms are functioning in a proper and timely manner, and governmental institutions and other stakeholders are actively participating in the project. At the national level, this involves improved performance of environmental institutions; enhanced policy integration with other sectoral ministries; and facilitation of stakeholder participation. Budget breakdowns for in-kind contributions have been provided by all countries (Annex L).
119. As the Implementing Agency, UNDP will backstop the project with its own staff members, both from the headquarters and locally from the Country Offices. The UNDP Resident Representative of the UNDP in Bratislava will be the Principal Resident Representative for the Project. He will be kept informed of all substantive developments of the Project for his onwards coordination with the Government of the host country as well as with UNDP Resident Representatives in other beneficiary Governments to better integrate other activities at the country/region level with GEF programming.

Outputs

120. An output budget, including the in-kind and cash contributions from participating governments can be found in Annex L. Most governments are providing in-kind contribution towards the cost of premises, office overheads, communications, workshop materials and accommodation, and transportation. A few countries have also indicated that they will contribute staff salaries towards administration, the provision of inventory data, and the participation of government staff in the oversight of the project. (Inventory experts will be paid by the project.)
121. The output budget has been calculated based on the cost of the activities carried out under the Regional Co-ordination Unit plus the aggregate for all national activities. However, countries may choose to apportion national allocations slightly differently, according to national priorities, outside of the common regional activities.
122. The Regional Co-ordination Unit activities amount to approximately 39% of the budget total. However, apart from the Regional Co-ordination Unit (12% of the total), all of this sum is targeted for regional and sub-regional workshops, technical assistance sub-contracts for the regional and international experts who will aid countries at the national level, peer review of the key-source inventories, translation and dissemination of technical materials, establishment of the network of inventory experts and for information exchange.

123. The national activities account for 53% of total funds. The national allocation will be used to improve emission factors and inventory methods, to institutionalize the inventory process, to strengthen procedures for archiving data, and quality control of the inventory data. National institutions (individual institutions, agencies, universities, NGOs, or other recognised legal entities) will be contracted to carry out this work thereby avoiding the creation of fully staffed national team. Based on in-country cost estimates provided by UNDP country offices, each country will have approximately 80 man months of time over the three years. Any savings obtained from regional activities should be targeted for national experts. Contracts that ensure the maximum use of national consultants will be favoured.
124. The remaining 8% of funds will be managed by the NCSU for monitoring and evaluation, and the time and travel of the Technical Advisory Panel.
125. Both regional and national budgets have been constructed in such a way as to minimize administrative overheads and to target project activities. At the regional level, this has been achieved by avoiding the creation of the regional center. At the national level, some of administrative overheads are minimized by using the existing national arrangements for climate change and situating the national inventory team leaders within the lead institutions responsible for inventories.

J. LEGAL CONTEXT

126. This project shall be the instrument referred to as such in Article 1 of the Standard Basic Assistance Agreement between the United Nations Development Programme and the Governments of Albania, Armenia, Azerbaijan, Croatia, Georgia, Macedonia, Moldova, Mongolia, Tajikistan, Turkmenistan, Slovenia and Uzbekistan. The following types of revisions may be made to this project document with the signature of the UNDP/GEF Executive Coordinator:
 - (a) Revisions in, or addition of, any of the annexes of the project document (with the exception of the Standard Legal Text for non-SBAA countries which may not be altered and the agreement to which is a precondition for UNDP assistance);
 - (b) Revisions which do not involve significant changes in the immediate objectives, outputs or activities of a project, but are caused by rearrangement of inputs agreed to or by cost increases due to inflation; and
 - (c) Mandatory annual revisions, which re-phase the delivery of agreed, project inputs or increased expert or other costs due to inflation or take into account agency expenditure flexibility.

ANNEXES

- K. Project Planning Matrix
- L. Activity Budget, UNDP Budget and in-kind contributions
- M. Workplan
- N. STAP Review and Response to STAP review
- O. GEF Council comments
- P. National stakeholders, by country
- Q. Institutional arrangements for inventory preparation
- R. Example of key source assessment, Uzbekistan
- S. Summary of key sources, for region
- T. Training package on Good Practice Guidance and Uncertainty Management in National Greenhouse Gas Inventories
- U. Terms of Reference

K. PROJECT PLANNING MATRIX

Project Strategy	Verifiable Indicators	Means of Verification	Assumptions and Risks
Project Development Goal: To build capacity of countries to fulfill their commitments as Parties to the UNFCCC.			
Immediate objectives (project outcomes):			
1. Strengthened national arrangements for compiling, archiving, updating, and managing greenhouse gas inventories	Key organisations have strategies for compiling, archiving, updating, and managing greenhouse gas inventories by end of project: ?? 12 national manuals of procedures ?? 12 long-term inventory improvement strategies ?? 12 national quality assurance/quality control plans	?? National manuals of procedures ?? Long-term inventory improvement strategies ?? National quality assurance/quality control plans	
2. Sustainable inventory process created	?? inventory experts employed by government (as result of awareness-raising & outreach campaign) ?? 12 long-term inventory improvement strategies ?? inventory archive established	?? End-of-project report ?? Long-term inventory improvement strategies ?? End-of-project report	Outreach campaign results in government funding for permanent inventory team
3. Enhanced technical capacity for preparing national inventories	National experts able to prepare national inventory: ?? 12 key source inventories produced and peer reviewed	?? key source inventories ?? peer review reports	
4. Improved methodologies and emission factors	?? Up to 3 emission factors improved to reflect appropriate regional circumstances	?? Technical advisory group comments (minutes of meeting)	
Impact: GHG inventory periodically updated and improved			
Outputs:			
1.1: Data collection strategy improved	Reduced gaps in inventory by end of project: ?? Number of new sources of institutional data	?? Key source inventories	

Project Strategy	Verifiable Indicators	Means of Verification	Assumptions and Risks
1.2: Data gaps reduced	Reduced gaps in inventory by end of project: ?? Number of methods identified to overcoming data gaps	?? “Country solutions” manual ?? Workshop report on overcoming barriers	
1.3: Inventory system documented and described	?? 12 national manuals of procedures by end of project ?? 12 inventory archives established	?? national manuals of procedures ?? end-of-project report	
1.4: Regional information exchange network established	Regional website established in first quarter: ?? Number of countries using website Email list-server established in first quarter: ?? Number of experts using network Database established ?? Number of experts in database In country peer review mechanism established ?? 12 in country peer reviews of key source inventories undertaken Regional workshop on overcoming barriers held	?? website, with access information ?? list-server ?? database ?? peer review reports ?? workshop report	
2.1 Sustainable inventory process	?? inventory experts employed by government (as result of awareness-raising & outreach campaign) ?? 12 long-term inventory improvement strategies ?? inventory archive established In-kind/in cash funding increases by end project: ?? 1 donor identified Awareness of government & stakeholders increased: ?? awareness-raising campaign ?? COP-9 side event	?? End-of-project report ?? Long-term inventory improvement strategies ?? Archives ?? Donor proposal ?? Copy of awareness-raising strategy ?? Report/agenda of COP-9 side event	Outreach campaign results in government funding for permanent inventory team

Project Strategy	Verifiable Indicators	Means of Verification	Assumptions and Risks
3.1: Number of qualified national inventory experts increased	<p>Experts trained in GPG:</p> <p>?? At least 2 experts trained in GPG</p> <p>?? 8 trained at national level by trainers²¹</p> <p>?? No. of national training workshops held</p> <p>Materials disseminated:</p> <p>?? Number of documents disseminated</p>	<p>?? End-of-project report</p> <p>?? End-of-project report</p> <p>?? Copy of materials</p>	
3.2: IPCC Good Practice applied to extent needed	<p>?? 12 quality assurance/quality control plans created</p> <p>?? 12 long-term inventory improvement strategies prepared</p> <p>?? 12 key-source inventories compiled, reflecting use of GPG application</p>	<p>?? Long-term inventory improvement strategies</p> <p>?? National quality assurance/quality control plans</p> <p>?? Peer reviews of key source inventories</p>	
4.1: Increased reliability of emission factors	<p>Selection process, assumptions and methods documented:</p> <p>?? Number of emission factors documented and archived</p>	<p>?? Archive</p>	
4.2: Improved and/or new emission factors for key sources	<p>Up to 3 emission factors improved to reflect appropriate regional circumstances</p> <p>?? Up to 3 improved emission factors</p> <p>?? Up to 3 workshops on emission factors held</p> <p>?? Number of local emission factors disseminated</p> <p>?? Uncertainties reduced (by peer review)</p>	<p>?? Results of peer reviews</p> <p>?? Technical Advisory Group minutes</p> <p>?? Workshop reports</p>	
4.3: Methodologies to estimate emissions improved using national and/or regional approaches	<p>?? Number of methods identified, compiled and assessed</p>	<p>?? Copy of “best practices” document</p>	

²¹ As a national activity, not funded under this project.

L. ACTIVITY BUDGET

OUTPUT	GEF	GOV'T in-kind	GOV'T in cash	Other	Total
Immediate objective 1: Strengthened national arrangements for compiling, archiving, updating, and managing greenhouse gas inventories					
Output 1.1: Existing data collection improved	116,000	47,000	0	0	163,000
Output 1.2: Activity data gaps reduced	130,000	47,000	0	0	177,000
Output 1.3: Inventory system documented and described	50,000	23,500	0	0	73,500
Output 1.4: Regional information exchange network established	275,000	23,500	0	0	298,500
Immediate objective 2: Sustainable inventory team created					
Output 2.1: Sustainable inventory team created	390,000	94,000	0	0	484,000
Immediate objective 3: Enhanced technical capacity for preparing national inventories					
Output 3.1: Number of qualified national inventory experts increased	110,000	23,500	0	50,000	183,500
Output 3.2: IPCC Good Practice applied to extent needed	310,000	70,000	0	0	380,000
Immediate objective 4: Improved methodologies and emission factors					
Output 4.1: Increased reliability of emission factors	58,000	23,600	0	0	81,600
Output 4.2: Improved and/or new emission factors for key sources	176,000	70,000	0	0	246,000
Output 4.3: Methods to estimate emissions improved/developed using national/regional approaches	310,000	47,000	0	0	357,000
Total	1,925,000	469,100	0	50000	2,444,100

BUDGET, 2003-5

Budget Line	Description	Objective	Allocation	Total Budget	2003	2004	2005
10	PERSONNEL						
1100	International Project Staff						
11.01	Project Manager (P3/P4)	1.1-4.3	REG	329,400	109,800	109,800	109,800
11.51	Consultants - technical assistance	1.1-4.3	NAT/REG	20,000	10,000	7,500	2,500
11.52	Consultants - workshops	1.1,1.2,3.2,4.2	INT	27,000	15,000	6,000	6,000
11.53	Project technical advisory panel	1.1-4.3	INT	90,000	30,000	30,000	30,000
1199	Component subtotal			466,400	164,800	153,300	148,300
1300	National Support Staff						
1399	Component subtotal			0	0	0	0
1600	Mission costs						
16.01	Technical advisory panel missions	1.1-4.3	INT	20,000	10,000	5,000	5,000
16.02	Project evaluation -- mission & personnel	1.1-4.3	INT	25,000	0	12,500	12,500
	Component subtotal			45,000	10,000	17,500	17,500
1700	National Project Personnel						
17.01	National project teams (12)	1.1-4.3	NAT	390,000	130,000	130,000	130,000
17.02	Peer review (12 national experts)	1.4, 3.2	NAT	16,000	0	0	16,000
17.51	Consultants -- workshops	1.1,1.2,3.2,4.2	NAT/REG	22,000	10,000	8,000	4,000
17.52	Consultants - data collection/compilation	1.1, 1.2	NAT/REG	5,000	5,000	0	0
17.53	Consultants - methods collection/compilation	4.2, 4.3	NAT/REG	24,000	12,500	7,500	4,000
	Component subtotal			457,000	157,500	145,500	154,000
20	SUBCONTRACTS						
21.01	Regional Environment Centre	2.1	REG	160,230	67,935	43,785	48,510
21.02	National institutions	1.1-4.3	NAT	360,000	120,000	120,000	120,000

	Component subtotal			520,230	187,935	163,785	168,510
30	FELLOWSHIPS/MEETINGS						
32.01	Workshop -- Project Startup (GPG)	3.2	NAT	10,000	10,000	0	0
32.02	Workshop -- Legal barriers/data collection	1.1,1.2	NAT	65,000	65,000	0	0
32.03	Workshop -- GPG (QA/QC)	3.2	NAT	60,000	0	0	60,000
32.04	Sub-regional workshop -- Emission Factors	4.2	NAT	35,000	35,000	0	0
32.05	Sub-regional workshop -- Emission Factors	4.2	NAT	35,000		35,000	0
32.06	Sub-regional workshop -- Emission Factors	4.2	NAT	35,000	0	35,000	0
	Component subtotal			240,000	110,000	70,000	60,000
40	EQUIPMENT						
	Component subtotal			0	0	0	0
50	MISCELLANEOUS						
53.01	Sundries		INT	5,777	5,777	0	0
53.02	Sundries (communications, translation)	1.4,2.1	NAT	48,000	16,000	16,000	16,000
	Component subtotal			53,500	21,500	16,000	16,000
90	PROJECT TOTAL (Operational)			1,782,130	651,735	566,085	564,310
	AOS UNOPS (8%)			142,593			
	Component subtotal			142,593			
99	GRAND TOTAL			1,925,000			
Notes: NAT = national allocation; REG = regional allocation; INT = international allocation.							

Budget description

UNOPS will execute the project, with regional activities contracted to the Regional Environment Centre, Hungary. A brief description of the budget lines follows:

International Project Staff:

Project Manager (11.01): The Project Manager will be responsible for overall project coordination, implementation, monitoring and evaluation, and dissemination. He/she will implement the regional workplan within UN reporting and management regulations, reporting to UNOPS, UNDP Bratislava and the NCSU. He/she will be based at the REC in Hungary and recruited internationally, using UN processes and procedures. The Terms of Reference can be found in Annex T.

Short-term international/regional consultants (11.51)

Short-term consultants will provide ad hoc technical assistance for project activities carried out at the national and/or regional level, and give guidance on scientific or methodological issues. Where possible, the consultants will be hired from the region, although international expertise may be required in some areas (detailed Terms of Reference will be prepared by the Project Manager during project implementation, based upon technical assistance requests from countries).

International workshop resource persons (11.52)

Allocation has been made hire up to two international resource persons to attend the three regional workshops scheduled under the project. For the sub-regional workshops on emission factors, the allocation is one international resource person per workshop.

Technical Advisory Panel (11.53)

As opposed to the ad hoc technical assistance of the short-term consultants above, the Technical Advisory Panel (TAP) will provide technical and policy guidance to national teams on issues related to the quality of national GHG inventories at strategic points during the project. The TAP will also review project outputs as a quality control measure. Terms of Reference can be found in Annex T.

Mission Costs

This includes travel for developing and implementing the project, review meetings, and for attending workshops during the course of the project.

Technical Advisory Panel missions (16.01)

These funds are for the travel of the Technical Advisory Panel members to attend key workshops and evaluation meetings.

Project independent evaluation mission and personnel (16.02)

There will be two independent evaluations of the project. It is anticipated that travel will only be required to meet with the Executing and Implementing Agencies, not with participating countries. The mid-term review will focus on performance (effectiveness, efficiency and timeliness), relevance and lessons learned about the project design, management and implementation. The final evaluation will focus on similar issues as the mid-term evaluation, but also consider project impact and sustainability and replicability of results. Recommendations on follow-up activities will also be provided. Terms of Reference for both evaluations will be developed by the Project Manager and approved by the regional Project Steering Committee.

National Project Personnel

National project teams (17.01)

National experts will be hired in the participating countries at local rates to carry out national project activities. There will be an equivalent allocation of man months to each country, based on national rates provided by participating UNDP Country Offices. For Terms of Reference, see Annex T.

Peer review (17.02)

Under Outputs 1.4 and 3.2, all countries will develop a key source inventory that is reviewed by an expert from another participating country. It is estimated that each review will take 3 days' maximum. This budget line provides funding for this capacity building activity. The Project Manager will develop the Terms of Reference for the peer review mechanism.

Regional workshop resource persons (17.51)

Allocation has been made hire up to three regional resource persons to attend each of the three regional workshops scheduled under the project. For the sub-regional workshops on emission factors, the allocation is up to two regional resource persons per workshop.

Short-term regional/national consultants (17.52, 17.53)

Short-term consultants will be hired to assist the Project Manager in identifying, compiling and comparing data and methods within the region, as outlined in the project document. Where possible, the consultants will be national experts involved in the project to carry out the following activities:

- ?? Data collection and compilation issues (Objectives 1.2 and 1.2) (17.52): Assisting with identification of barriers to obtaining or compiling data and compilation of country solutions, training in methods to overcome data gaps, e.g. extrapolation, interpolation
- ?? Emission factor issues (Objectives 4.2 and 4.3) (17.53): Assisting with compilation and comparison of local methodologies, prioritisation of emission factors, and identification of suitable methods and approaches to improving emission factors.

Subcontracts

Regional Environment Center (21.01)

UNOPS will contract the Regional Environment Center (REC) to carry out regional activities as outlined in the project document. The budget for the REC contract is outlined in more detail below.

National institutions (21.06)

National institutions will be contracted in the participating countries to carry out project activities (in conjunction with national experts hired under 17.01). There will be an equivalent allocation of man months to each country, based on national rates provided by participating UNDP Country Offices. For Terms of Reference, see Annex T.

Fellowship/Meetings

Six workshops are documented in the project, namely:

- ?? Regional Start-up Workshop with training in GPG (32.01) (with \$50,000 funding from GLO/01/G32)
- ?? Regional Exchange Workshop on legal barriers to data collection (32.02)
- ?? Regional Finalisation Workshop with training in GPG (32.03)
- ?? Sub-regional Workshop on emission factors (32.04)
- ?? Sub-regional Workshop on emission factors (32.05)
- ?? Sub-regional Workshop on emission factors (32.06)

The Project Manager will develop workshop agendas in consultation with participating countries, the Project Steering Committee and the Technical Advisory Panel. Where possible, the workshops should include hands-on training.

For regional workshops, the budget allocation is based upon estimated logistical costs (administrative support, conference facilities, translation, etc) and the travel of 1-2 experts from each participating country, and international and regional resource team members. Travel of the Project Manager and UNDP-GEF is provided under the REC contract and budget line 16.01 respectively.

For sub-regional workshops, the budget allocation is based upon estimated logistical costs (administrative support, conference facilities, translation, etc), the travel of 2 experts from six participating countries. Travel of the Project Manager and UNDP-GEF is provided under the REC contract and budget line 16.01 respectively. One regional workshop on emission factors could be held in lieu of two sub-regional workshops, should countries request such an option. Other countries from the region may attend the regional workshops as long as their participation is funded from the respective climate change enabling activities, and not from this project.

The logistics for two regional workshops will be handled by the REC under the contract with UNOPS. The major portion of funding for the Start-up Workshop (\$50,000) comes from parallel Swiss financing (GLO/01/G32).

Miscellaneous

Sundries (53.01)

This allocation is for the international hiring process of the Project Manager.

Sundries (communications, translation) (53.02)

This budget allocation will be apportioned on the following basis of 1) an equal lump sum for all participating countries for national translation needs, e.g. translating the awareness-raising strategy into local language, and 2) a differential sum reflecting internet connection costs for each country over three years, based on the quotes provided by countries.

Support costs

UNOPS will charge an 8% service charge for its execution activities. UNDP Country Offices will be reimbursed on a cost-recovery basis.

Regional Environment Center contract: draft budget breakdown

Description of activities	Objective	Total Budget	2003	2004	2005
PERSONNEL					
National support staff					
Administrative & IT assistants (P/T)	1.1-4.3	30,000	10,000	10,000	10,000
Component subtotal		30,000	10,000	10,000	10,000
Mission costs					
Project Manager/RCU	1.1-4.3	35,000	15,000	10,000	10,000
Component subtotal		35,000	15,000	10,000	10,000
SUBCONTRACTS					
Media/PR consultancy	2.1	8,000	8000	0	0
Prep'n/dissemin reports	1.1-1.2,2.1,4.1-4.3	6,500	2,000	2,500	2,000
Technical assistance	1.1-4.3	10,000	5,000	2500	2,500
Translation	1.1-1.2,2.1,4.1-4.3	6,000	2,000	2,000	2,000
Component subtotal		30,500	17,000	7,000	6,500
FELLOWSHIPS/MEETINGS					
Startup Workshop (GPG) -- logistics	3.2	5,000	5,000	0	0
Workshop GPG (QA/QC) -- logistics	3.2	5,000	0	0	5,000
Component subtotal		10,000	5,000	0	5,000
EQUIPMENT					
Non-expendible office equipment	1.1-4.3	6,000	4,000	1,000	1,000
Expendible office equipment	1.1-4.3	3,000	1,000	1,000	1,000
Component subtotal		9,000	5,000	2,000	2,000
MISCELLANEOUS					
Overheads	1.4,2.1	35,100	11,700	11,700	11,700
Sundries	1.1-4.3	3,000	1,000	1,000	1,000
Component subtotal		38,100	12,700	12,700	12,700
SUB-TOTAL		152,600	64,700	41,700	46,200
Financial management (5%)		7,630	3,235	2,085	2,310
GRAND TOTAL		160,230	67,935	43,785	48,510

Description of budget lines

National Support Staff

Administrative assistant

The REC will hire one full-time administrative assistant for the project duration.

Mission costs

Project Manager/Regional Co-ordination Unit

These funds are for the travel of the Project Manager and the Project Assistant (as needed) throughout the region in support of the Project. Travel is anticipated primarily for attending workshops and for developing the project. At least one mission to the UNFCCC COP to present project results is anticipated.

Subcontracts

Much of the work performed by associate organisations will be administered through REC subcontracts. Subcontracts may be executed with the individual institutions, agencies, NGOs or other recognised legal entities to perform specific activities associated with the GEF/UNDP project. The subcontracts will be based upon specific terms of reference prepared by the Project Manager and agreed with NCSU and UNOPS prior to contract execution. It is important to stress that the subcontracts are assigned on the basis of comparative advantage for the countries in the region. The budgets proposed by subcontractors will be carefully assessed to ensure the maximum possible use of national consultants and the transfer of benefits to the region. The anticipated subcontracts are as follows:

- ?? Media/PR consultancy: estimated development and production costs for preparing an awareness-raising campaign that can be modified at the national level under Output 2.1
- ?? Preparation/dissemination of reports: estimated development and production costs for preparing a country solutions (best practices) manual as an outcome of Outputs 1.1, 1.2, 4.2, and 4.3.
- ?? Technical assistance: for general technical assistance under the project
- ?? Translation: All essential documents, project outputs, and workshop materials should be available in Russian and English. Countries will have additional translation budgets through UNOPS to translate documents into national languages.

Fellowships/Meetings

The REC shall be responsible for the logistics of at least two regional workshops under the project; the project start-up workshop and the finalization workshop. (It is anticipated that participating countries may choose to host the remaining workshops under the project.)

Equipment

Procurement of equipment under the project will strictly follow UN procurement procedures, according to the value of the purchased goods. UNOPS will be responsible for ensuring that the equipment and supplies procured using GEF/UNDP funds are used strictly for the purposes of the project.

Non-expendable office equipment

Includes items of a value of US\$ 400 or more, with a serviceable life expectancy of at least five years. The REC will maintain inventory records of all items of non-expendable equipment procured through the project.

Expendable equipment

Expendable equipment (consumables) includes items of a value of less than US\$ 400 with a serviceable life expectancy of less than 5 years. The REC will maintain financial records of all expendable equipment procured through the project.

Miscellaneous

Operations and maintenance

This sum covers rent, office and equipment insurance, cleaning & maintenance, guarding, internet access, information technology support, reception costs and purchasing.

Sundries

The cost of activities undertaken by the Project Manager for project reporting, monitoring and evaluation are included in this general category. Telecommunication and postage costs are also included.

Financial management

The REC will charge a 5% service charge for its execution activities, including cash, bank, payroll, bookkeeping, financial reporting, financial control and other financial services, HR services (orientation and training, subcontract management, etc) and general overheads.

IN-KIND CONTRIBUTIONS (Total: \$518,696)

ALBANIA

Description	Cost	No. mths	Total (US\$)
Office rent	700	36	25,200
Telephone	200	36	7,200
Car oil	200	36	7,200
Honorarium: Project Steering Committee	100	36	3,600
Total			43,200

ARMENIA

Description	Cost	No. mths	Total (US\$)
Office rent	500	36	18,000
Electricity, telephone	56	36	2,016
Total			20,016

AZERBAIJAN

Description	Cost	No. mths	Total (US\$)
Office rent	850	36	30,600
Telephone	160	36	5,760
Car oil	140	36	5,040
Total			41,400

CROATIA

Description	Cost	No. mths	Total (US\$)
Government			
Office	330	36	11,880
Computer equipment	220	36	7,920
Heating, electricity, cleaning, water, security	30	36	1,080
Telephone, fax	10	36	360
Honorarium	4300	3 years	12,900
<i>Sub-total</i>			<i>34,140</i>

Private Sector			8,000
Total			42,140

GEORGIA

Description	Cost	No. mths	Total (US\$)
Office rent	300	36	10,800
Office equipment	1500	3 years	4,500
Telephone, fax, email	65	36	2,340
Salary	1800	3 years	5,400
<i>Sub-total</i>			<i>25,020</i>
Special government programme	25,000	3 years	75,000
Total			100,020

MACEDONIA

Description	Cost	No. mths	Total (US\$)
Office rent	500	36	18,000
Telephone	200	36	7,200
Expendable equipment & transportation costs	1600	3 years	4,800
Total			30,000

MOLDOVA

Description	Cost	No. mths	Total (US\$)
Office rent	600	36	21,600
Equipment			4,800
Honorarium for project steering committee	100	36	3,600
Total			29,000

MONGOLIA

Description	Cost	No. mths	Total (US\$)
Office space rent	500	36	18,000
Heating and electricity for office	2,000	3 years	6,000
Local telephone calls	150	36	5,400
Partial local travel on official business	300	36	10,800
Total			40,200

SLOVENIA

Description	Cost	No. mths	Total (US\$)
Office rent	600	36	21,600
Telephone, fax	150	36	5,400
Computer equipment	150	36	5,400
In-country travel	5,000		5,000
Private sector co-operation	5,000		5,000
Salary	200	36	7,200
Total			49,600

TAJIKISTAN

Description	Cost	No. mths	Total (US\$)
Office rent	500	36	18,000
Telephone	100	36	3,600
Car oil	200	36	7,200
Total			28,800

TURKMENISTAN

Description	Cost	No. mths	Total (US\$)
Office rent	800	36	28,800
Communication facilities	300	36	10,800
Driver	150	36	5,400
Car oil	25	36	900
Payment of communal expenses	150	36	5,400
Technical maintaining of car	120	36	4,320
Technical maintaining of computers and office equipment	120	36	4,320
Total			59,940

UZBEKISTAN

Description	Cost	No. mths	Total (US\$)
Office rent	500	36	18,000
Telephone	200	36	7,200
Cost of statistical information	100	3 years	300
Car rent and car oil	250	36	9,000
Total			34,500

M. DRAFT PROJECT WORKPLAN

(The Project Manager will review the national workplans to ensure that national activities are linked to the common regional activities.)

Activity	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12
Immediate objective 1: Strengthened national arrangements for compiling, archiving, updating, and managing greenhouse gas inventories												
Output 1.1: Data collection strategy improved												
1.1.1 Identify data gaps	X	X										
1.1.2 Identify sources of available data from prior/ongoing international and regional projects	X	X	X	X								
1.1.3 Identify prior and ongoing national sources of data in key source categories	X	X	X	X	X	X						
1.1.4 Identify barriers to obtaining available data in key source categories		X	X	X	X	X						
1.1.5 Compile country solutions (practices) to overcoming barriers			X	X	X	X						
1.1.6 Utilise country solutions (practices) to overcoming barriers			X	X	X	X	X	X	X	X	X	X
1.1.7 Check conversion of units and validate data compiled	X	X	X	X	X	X	X	X	X	X	X	X
Output 1.2: Data gaps reduced												
1.2.1 Identify data that must be compiled/developed to fill gaps	X	X										
1.2.2 Identify appropriate methods/approaches to overcome data gaps		X	X	X	X	X	X	X	X	X	X	X
1.2.3 Compile/develop country solutions/methods for overcoming data gaps	X	X	X	X	X	X						
1.2.4 Utilise country solutions for overcoming data gaps												
1.2.5 Check conversion of units and validate data compiled	X	X	X	X	X	X	X	X	X	X	X	X
Output 1.3: Inventory system documented and described												
1.3.1 Archive relevant data (e.g. activity data, emission factors, conversion factors)	X	X	X	X	X	X	X	X	X	X	X	X
1.3.2 Document the selection process of national activity data and related parameters used in the inventory preparation process	X	X	X	X	X	X	X	X	X	X	X	X
1.3.3 Document the methods and assumptions used	X	X	X	X	X	X	X	X	X	X	X	X
1.3.4 Document the data collection methods of data providers					X	X	X	X				
1.3.5 Elaborate a national manual of procedures to prepare the inventory					X	X	X	X	X	X	X	X
Output 1.4: Regional information exchange network established												
1.4.1 Establish regional website and identify ways to make the site sustainable	X	X	X	X	X	X	X	X	X	X	X	X
1.4.2 Create regional database of national inventory experts	X	X										
1.4.3 Identify needs in legislation and compliance measures for data collection and interagency co-ordination		X	X	X								
- <i>Regional Exchange Workshop on Data Collection Strategies</i>				X								
1.4.4 Disseminate regional and international experiences in legal and other regulatory approaches to overcoming barriers to data collection			X	X	X							
1.4.5 Establish an in-country technical inventory peer review mechanism					X	X	X	X	X	X	X	X

Activity	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12
Immediate objective 2: Sustainable institutional process created												
Output 2.1: Sustainable institutional process created												
2.1.1 Develop a long-term in-country programme to improve inventory (Review strategy periodically based on project results)	X	X				X			X			X
2.1.2 Carry out awareness-raising campaign targeting policy-makers and other stakeholders			X	X	X	X	X	X	X	X	X	X
2.1.3. Identify linkages to Annex I Parties			X	X	X	X	X	X	X	X	X	X
2.1.4 Identify end-of-project financing e.g. multilateral, bilateral, private sector							X	X	X	X	X	X
Immediate objective 3: Enhanced technical capacity for preparing national inventories												
Output 3.1: Number of qualified national inventory experts increased												
3.1.1 Train (trainers) in IPCC Good Practice applications - <i>Project start-up workshop (to include training component)</i>	X	X			X	X			X	X	X	X
3.1.2 Distribute supporting materials and education kits	X	X	X	X	X	X	X	X	X	X	X	X
3.1.3 Develop an interactive CD-Rom/internet training module							X	X	X	X	X	X
Output 3.2: IPCC Good Practice applied												
3.2.1 Key sources identified through Tier 1 assessment	X											
3.2.2 Comparison of key source specific assessments	X											
3.2.3 Identify appropriate methods source by source, using GPG decision trees	X	X	X	X	X	X	X	X	X	X	X	X
3.2.4 Identify areas where recalculations are necessary, and plan strategy to ensure consistency			X	X			X	X		X	X	
3.2.5 Prepare quality assurance and quality control plan - <i>Regional workshop on GPG for quality assurance and quality control</i>									X	X	X	X
3.2.6 Compile key source inventory for peer review									X	X	X	X
Immediate objective 4: Improved emission factors and methods												
Output 4.1: Increased reliability of emission factors												
4.1.1 Document the selection process of emission factors and other conversion factors used in inventory preparation process	X	X	X	X	X	X	X	X	X	X	X	X
4.1.2 Document the methodologies and assumptions used	X	X	X	X	X	X	X	X	X	X	X	X
Output 4.2: Improved and/or new emission factors for key sources												
4.2.1 Compile local emission factors within region	X	X	X	X								
4.2.2 Compile emission factors for older technologies (to reduce data gaps)	X	X	X	X								
4.2.3 Disseminate local emission factors within region	X	X	X	X								
4.2.4 Improve links to international emission factor databases (e.g. IPCC, IEA)		X	X	X								
4.2.5 Prioritise emission factors needing improvement using key source analysis and GPG tools such as sensitivity analysis	X	X	X	X				X	X			
4.2.6 Improve and/or develop 2-3 regionally-significant emission factors, consistent				X	X	X	X	X	X	X	X	X

Activity	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12
with IPCC guidance on methodologies												
- <i>Sub-regional workshop to develop/improve emission factor 1</i>					X							
- <i>Sub-regional workshop to develop/improve emission factor 2</i>								X				
- <i>Sub-regional workshop to develop/improve emission factor 3</i>								X				
Output 4.3: Methodologies to estimate emissions improved using national and/or regional approaches												
4.3.1 Compile local methodologies within region	X	X	X	X								
4.3.2 Disseminate local methodologies within region and externally	X	X	X	X								
4.3.3 Assess the suitability of the disseminated methodologies for use at the national level, applying GPG		X	X	X	X	X	X					

N. STAP REVIEW AND RESPONSE TO STAP REVIEW

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The project aims at building capacity for improving GHG inventories using good practice guidance of IPCC. This project is born out of genuine need of majority of non-Annex-I countries. Groups of developing countries have been urging for support for such cost-effective regional approaches for improving the quality of activity data and emission factors.

I strongly recommend GEF support to the proposed project from Europe/CIS region. The proposal has emerged from a good consultation process in the region and will contribute to global efforts to improve the quality of GHG inventories in non-Annex-I countries. It is highly replicable in other regions of the developing world as it is a cost-effective approach and it is technically sound (as based on GPG). If this project is approved quickly, there will be similar requests from other regions for capacity building, to utilize the GPG prepared by IPCC. Thus, GPG will become a useful tool to improve the GHG inventories. The following outputs projected clearly justify the project namely;

- creation of sustainable inventory teams,
- development of national inventory strategy,
- improved emission factors and activity data,
- trained technical teams and technical peer review process, and
- sustained improvement in quality of GHG inventory.

I have a few minor suggestions to improve the effectiveness of the proposed project. Some suggestions may involve changes in the expression (or language) or adding a few activities or marginally altering the process suggested. All these suggestions could be possibly incorporated without much effort.

1. **Sustainable Inventory Institution;** rather than a "team". Teams or individual members of the teams may sometimes change, but if institutions are identified for each sector such as LUCF, energy industry, agriculture etc., sustaining the process may become easier. Teams could be selected from such identified institutions. Building on existing infrastructure and technical capacity of these is already included in the activities. Thus, only a slight change in the focus is suggested.

While the GEF project should not directly fund permanent institutions, the idea of targeting institutions to strengthen them has been acknowledged on pg. 8, para 28. The point has been added as both a stakeholder function on pg 9, para 3 and a sustainability function on pg 15, para 50.

2. **Technical Peer Review;** as an 'in-country' process will be a winner. External review or verification is a sensitive issue for many non-Annex-I country governments, as they think that only Annex-I country inventories or National Communications can be reviewed. To be safe, I suggest that technical review is restricted to be an 'in-country' process, but the inventories could be presented at regional workshops, where regional and even external experts could comment or suggest improvements, if necessary.

During the Project Development Workshop in Bratislava, those countries that had received technical reviews of inventories through the National Communications Support Unit endorsed the process. This

process was then proposed as one way of obtaining an external review or validation. However, the peer review mechanism remains to be fully developed. The STAP comments have been incorporated into the project brief on pg 9, para 34, and under Output 1.4, p. 12. Additionally, the reference in Activity 1.4.4 to the UNFCCC review process has been eliminated.

3. **Utility of Improved Activity Data or Data:** I have always argued that data or activity data or even some emission factors needed for quality GHG inventory are also needed for several national conservation and development programmes. For example, improved activity data on forest conversion and deforestation rates, biomass growth rates, milk yields, efficiency of many energy conversion processes etc., are needed for other national programmes as well. Thus, I suggest adding the following under justification and / or projecting-end-outputs.
- to demonstrate the multiple benefits to the country from improved data or activity data, and
 - investment in infrastructure or technical capacity building will benefit the country beyond the GHG inventories

This important point has been added into the project justification on pg 8, para 26. It has also been noted within the awareness-raising strategy outlined in Immediate Objective 2, pg 12-13, and on p 15, para 48.

4. **Output 1.1 and 1.2:** Add on activity specifically aimed at "validation" and "quality check" for the existing data compiled as well as new data collected.

Activity 1.3.5 "validate conversion of units and validate data compiled" has been moved to page 11 under Output 1.1 (Activity 1.1.7) and Output 1.2 (Activity 1.2.4).

5. **Output 4.2 "New Emission Factors":** I suppose that Activity 4.2.1 and 4.2.2 also mean developing new emission factors; which are critical and regionally relevant. If not, a dedicated activity may be added to develop a few (three) regionally important emission factors, based on measurements and experiments.

Activities 4.2.1 and 4.2.2. refer to compiling existing local emission factors for dissemination within the region. After training in good practice and improvement of activity data, three emission factors will be identified for improvement or development which are critical and regionally relevant. However, countries agreed that any new emission factors will be developed using methods consistent with IPCC guidelines. No new methods for estimating emissions will be developed under this project due to the potentially high costs.

6. **Risk of Ensuring Sustainability of Inventory Teams:** This risk could be minimized by identifying appropriate institutions for different sectors in each country and supplementing the existing infrastructure and technical expertise at these institutions, national governments could also contribute to this activity.

This point has been added under sustainability on pg 15, para 50.

7. **Risk of Absence of Support from National Governments (suggested addition):** Attempts will be made to demonstrate that improvement in quality of data, activity data and emission factors will also be useful for the countries, beyond preparing quality GHG inventories. The investment made or capacity built will also provide quality data for the countries for other national programmes.

The awareness-raising strategy on pg 15, para 48 has been strengthened with this argument.

8. **NCSU Project Development Questionnaire:**

- it is a comprehensive and useful questionnaire developed by NCSU
- it is supposed to help countries to prepare PDF-B proposal on "capacity building:"

- is it necessary to include such a long questionnaire, may be O.K.

The questionnaire has been deleted, but is available upon request.

9. **The institutional arrangement given is simple, feasible and adequate.** A very intensive monitoring process is included and would be useful for other regions. Many of the activities, such as 'side events' at COP meetings at high political level, are innovative and will create awareness among policy makers of the region. In addition to the regional activities, rightly there is scope for activities based on national strategies.

Let me complement the national teams of Europe/CIS, NCSU team and UNDP for promoting this regional and cost-effective approach, which has been recommended by several GEF and UNFCCC workshops, where non-Annex-I Parties participated. I would be happy if similar regional programmes are initiated for other regions of the developing world.

O. GEF EXECUTIVE COUNCIL COMMENTS AND RESPONSE

Swiss Constituency Technical Comments on Work Program GEF/C/18

NºB-21: Regional: Capacity Building for Improving National Greenhouse Gas Inventories (Europe and CIS); (UNDP); GEF: 2.263 USD million; total: 3.257 USD million

General

The project will initiate a regional programmatic approach developed to build capacity for improving the quality of data inputs to national greenhouse gas inventories, using the good practice guidance of IPCC. By strengthening institutional capacity to prepare inventories and establishing a trained, sustainable team the project will enable countries to reduce uncertainties and improve the quality of inventories for Second National Communications. The project has emerged from a good consultation process in the region and will contribute to global efforts to improve the quality of GHG inventories in non-Annex I countries. Switzerland is co-financing this project through a support arrangement with UNDP's National Communication Support Unit (NCSU).

The main risk of this project is that governments will not have funds to sustain the national arrangements, inventory team and regional information exchange network once the project ends. In the absence of this project, the risk of losing the expertise gained during the preparation of the initial National Communication could already materialise in the year to come as the process towards the Second National Communication is not fully straightforward yet (COP7 decisions). The intervention is thus timely. The results of the regional effort undertaken to develop a cost effective and a long-term strategy for ensuring sustainability of the inventory teams will be relevant for other regions as well.

Conclusions and Recommendations

GEF support to the project is strongly recommended.

UNDP-GEF response: None required.

P. NATIONAL STAKEHOLDER INVOLVEMENT, BY COUNTRY

Country	Planned stakeholder involvement
Albania	<ol style="list-style-type: none"> 1. Ministry of Environment (MoE) 2. Climate Change Enabling Activities - Project Office under MoE * 3. Ministry of Industry and Energy 4. National Agency of Energy 5. Institute of Statistics 6. Ministry of Transport 7. Ministry of Agriculture and Food 8. Institute of Forestry and Pastures 9. Institute of Veterinary 10. Institute of Chemistry 11. Customer Office
Armenia	<ol style="list-style-type: none"> 1. Ministry of Nature Protection * 2. Ministry of Agriculture 3. Ministry of Energy 4. Ministry of Industry and Trade 5. Ministry of Transport and Communication 6. Yerevan Municipality 7. National Statistical Service 8. Academy of Science of the RA.
Azerbaijan	<ol style="list-style-type: none"> 1. Ministry of Ecology and Natural Resources * 2. Ministry of Agriculture 3. "Azerigaz" Joint Stock Company 4. State Oil Company 5. Baku City Municipality 6. State Committee for Statistics
Croatia	<ol style="list-style-type: none"> 1. EKONERG - Energy Research and Environmental Protection Institute * 2. Ministry of Environment and Physical Planning (co-ordination) 3. Central Bureau of Statistics (statistical data) 4. Energy Institute "Hrvoje Požar" (balance of energy demand and supply) 5. HEP - Croatian Electric Utility Company 6. INA - Croatian Oil Industry 7. Ministry of Interior 8. Faculty of Agriculture 9. Faculty of Forestry 10. Croatian Waters 11. Croatian Forests 12. ZGO - Environmental Protection and Waste Management Company 13. APO - Hazardous Waste Management Agency 14. Counties 15. Custom authorities
Georgia	<ol style="list-style-type: none"> 1. Ministry of Environment (MoE) 2. National Agency on Climate Change at the MoE * 3. Climate Change National Programme 4. State Commission on Climate Change 5. State Department of Statistics

* Organisation in bold is the institution responsible overall for inventory preparation.

	6. Ministry of Fuel and Energy 7. Ministry of Economy, Trading and Industry 8. Ministry of Agriculture and Food 9. Ministry of Transport and Communications 10. State Department of Forestry 11. Institute of Hydrometeorology of the Academy of Science of Georgia
Macedonia	1. Ministry of Environment and Physical Planning * 2. Macedonian Academy of Sciences and Arts 3. Statistical Office of the Republic of Macedonia 4. Ministry of Economy 5. Ministry of Traffic and Communications 6. Ministry of Agriculture, Forestry and Water Economy
Moldova	1. Climate Change Enabling Activity Project 2. Ministry of Ecology, Construction and Territorial Development * 3. Ministry of Energy 4. Institute of Energy of the Academy of Science of Republic of Moldova 5. Ministry of Industry 6. Ministry of Agriculture and Processing Industry 7. State Forest Service 8. State Ecological Inspectorate 9. Research Institute for Pedology, Agrochemistry and Hydrology 10. National Institute of Ecology (INECO) 11. Department for Statistical and Sociological Analyses
Mongolia	1. Climate Change Enabling Activity Project Management Team 2. Institute of Meteorology and Hydrology * 3. Ministry of Infrastructure 4. Ministry of Agriculture 5. National Technical University 6. Ministry of Environment and Nature 7. Related NGOs 8. Related private companies
Slovenia	1 Ministry of Environment, Spatial Planning and Energy 2 Environment Agency * 3 Statistical Office 4 Ministry of Transport 5 Ministry of Agriculture, Forestry and Food 6 Institute Jozef Stefan 7 University of Ljubljana, Faculty of Meteorology 8 University of Ljubljana, Biotechnical Faculty 9 Chamber of Commerce and Industry 10 Slovenian Institute of Agriculture
Tajikistan	1. Main Administration of Hydrometeorology and Environment Monitoring * 2. State Statistics Agency 3. Ministry of Energy 4. Ministry of Agriculture 5. Ministry of environment protection 6. Tajik Forest company 7. Academy of Sciences of the Republic of Tajikistan. 8. Ministry of Industry

* Organisation in bold is the institution responsible overall for inventory preparation.

Turkmenistan	<ol style="list-style-type: none"> 1. Ministry for Nature Conservation of Turkmenistan * 2. Ministry of Energy and Industry 3. Ministry of Agriculture 4. Ministry of Oil and Gas Industry and Mineral Resources 5. Ministry of Internal Affairs 6. Ministry of Melioration and Water Economy 7. National Institute for Statistics and Projecting 8. National Committee for Hydrometeorology under the Council of Ministries 9. National Agency for Civil Aviation 10. Department of Railways 11. Turkmenistan Marine Shipping Company
Uzbekistan	<ol style="list-style-type: none"> 1. Main Administration of Hydrometeorology (GLAVGIDROMET) 2. State Department of Statistics of Ministry of Macroeconomic and Statistics 3. Ministry of Agriculture and Water Resources Management 4. National Holding Company “UZBEK ENERGY” 5. National Holding Company “UZBEK OIL&GAS” 6. National Holding Company “UZBEK Building Construction” 7. National Holding Company “UZ Chemistry Industry” 8. Uzbek Agency “Housing and Communal Services” 9. State Joint Stock Company for automobile transport “UZAUTOTRANS” 10. Forestry Research Institute 1.

Q. INSTITUTIONAL ARRANGEMENTS FOR INVENTORY PREPARATION

Albania	The Ministry of Environment of Albania was responsible for the national GHG inventory and authorized the UNDP country office to hire a team of six national experts to develop the inventory. The experts were from relevant governmental organizations and research institutions and hired on an ad-hoc basis. No government-funded employees were involved.
Armenia	The Ministry of Nature Protection in Armenia is responsible for implementation of UNFCCC commitments, including preparation of the GHG inventory. The Department of Atmosphere Protection carried out the work. For the first National Communication, two posts were funded by government and 15 under the climate change enabling activity project.
Azerbaijan	The Ministry of Ecology and Nature Resources prepared the GHG inventory. Four experts carried out the work at the Ministry's center of climate change, financed from the government budget.
Croatia	The Ministry for Environmental Protection and Planning (MZOPU) is responsible for implementation of the UN Framework Convention on Climate Change. The GHG emissions inventory system for Croatia was established through the climate change enabling activity. The project took three years and involved over 100 experts from 20 institutions that contributed to the project either by preparing the National Communication itself or through workshops. The emissions inventory has been prepared by the company EKONERG, which gives technical support to MZOPU on issues related to GHGs and other pollutant emissions.
Georgia	A National Agency on Climate Change has been established at the Ministry of Environment. The Agency was responsible for the first National Communication, and for the inventory.
Macedonia	The Ministry of Environment and Physical Planning (MOEPP) is the executive agency for the first National Communication, and for the inventory. Three government-funded employees in the Ministry were in charge of the inventory, and contracted a research centre within Macedonian the Academy of Sciences and Arts to prepare the inventory. The 15-person inventory team was funded from the climate change enabling activity.
Mongolia	The National Agency for Meteorology, Hydrology and Environment Monitoring (NAMHEM), a Government implementing agency under the supervision of the Minister for Nature and the Environment of Mongolia, is responsible for the development and updating of the national inventory, as well as for Mongolia's National Communication. Two government-funded employees in NAMHEM carry out this function, sharing with their responsibilities for other activities. Technical experts responsible for each sector, who were involved from related ministries, agencies and organizations, were funded either under the climate change enabling activity or through bilateral co-operation.
Moldova	The Ministry of Ecology, Construction and Territorial Development is responsible for the overall inventory and the initial National Communication. Two government-funded employees in the Ministry's Department of Environment and Natural Resources/General Division of Environmental Impact Assessment and Waste Management and the State Ecological Inspectorate carried out this function. Thirty-three local consultants were involved in preparing the inventory, of which 13 were government-funded and 20 funded under the climate change enabling activity.
Slovenia	The Ministry of Environment, Spatial Planning and Energy is responsible for the implementation of the UNFCCC. The Environment Agency (which was created by merging the Hydrometeorological Institute and some other institutions) is responsible for inventory preparation. Several other institutions are also involved in this process, e.g. Statistical Office, Agency for Energy Efficiency, Institute of Energetics, Institute of Chemistry, Institute Jozef Stefan, Institute of Water Management, Chamber of Commerce and Industry, University of Ljubljana, Institute of Agriculture, Institute of Forestry, and the Institute of Transport. Thirty-five experts were involved in compilation of Slovenian GHG inventory; of which six were government-funded and 29 funded through enabling activities. Most of the non-energy related experts also contributed to Policies and Measures and Projections.
Tajikistan	The Climate change enabling activity UNDP/GEF is responsible for the overall inventory.

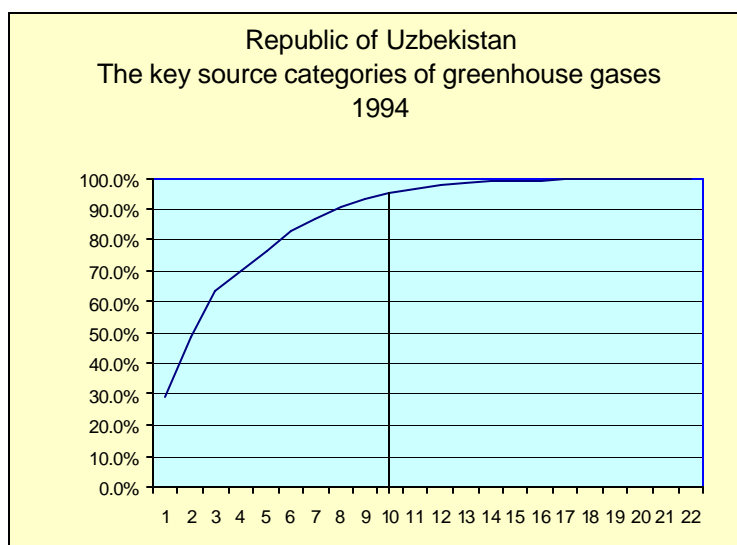
	Three employees employed and funded under this project.
Turkmenistan	The Research and Production Center for Ecological Monitoring at the Ministry of Nature Protection of Turkmenistan prepared the GHG inventory. At present, a sustainable long-term inventory group at the Ministry does not exist.
Uzbekistan	The Main Administration of Hydrometeorology (GLAVGIDROMET) at the Cabinet of Ministers is responsible for the coordination of obligations under the UNFCCC, including the inventory and National Communications. The Department of Statistics of the Ministry of Macroeconomic and Statistics collects national economic activity data and is completely funded by the government. The inventory in Uzbekistan was carried out by seven employees from GLAVGIDROMET, two from the Department of Statistics, and 11 from relevant ministries and agencies. They were funded through the climate change enabling activity.

R. EXAMPLE, KEY SOURCE ASSESSMENT FOR NATIONAL GREENHOUSE GAS INVENTORY

Uzbekistan, base year 1994: Referring to the table there are 10 categories identified as key sources, representing 95.26% of Uzbekistan's total emissions in CO₂ equivalent. The figure presents the key source categories graphically. The x-axis represents the key source categories, the y-axis the percentage of GHG emissions.

A	IPCC	B	C	D	E
Source Categories		Direct Greenhouse Gas	Current Year Estimate (1994) (Gg Carbon Equivalent)	Level Assessment for 1994	Cumulative Total of Column D
TOTAL			154153		
Fuel Combustion, Energy Industries		CO ₂	44785.2	29.05%	29.05%
Fugitive Emissions from Fuel, Oil and Gas		CH ₄	30365.2	19.70%	48.75%
Fuel Combustion, Residential		CO ₂	22587.5	14.65%	63.40%
Fuel Combustion, Commercial/Institutional		CO ₂	10381.8	6.73%	70.14%
Agriculture, Agricultural Soils		N ₂ O	9846	6.39%	76.52%
Fuel Combustion, Transport		CO ₂	9005.8	5.84%	82.37%
Agriculture, Enteric Fermentation		CH ₄	6706.5	4.35%	86.72%
Fuel Combustion, Manufacturing Industries and Construction		CO ₂	6263	4.06%	90.78%
Fuel Combustion, Agriculture/Forestry/Fishing		CH ₄	3854.9	2.50%	93.28%
Waste, Solid Waste Disposal on Land		CO ₂	3054	1.98%	95.26%
Industrial Processes, Cement Production		N ₂ O	2092.7	1.36%	96.62%
Industrial Processes, Ammonia Production		CO ₂	1838	1.19%	97.81%
Agriculture, Manure Management		CO ₂	916	0.59%	98.41%
Industrial Processes, Iron and Steel Production		CH ₄	774.4	0.50%	98.91%
Fuel Combustion, Other (not elsewhere specified)		CO ₂	336.7	0.22%	99.13%
Agriculture, Rice Cultivation		CH ₄	288	0.19%	99.31%
Fugitive Emissions from Fuel, Solid Fuels		CH ₄	275	0.18%	99.49%
Agriculture, Manure Management		CO ₂	260	0.17%	99.66%
Industrial Processes, Lime Production		N ₂ O	237.8	0.15%	99.81%
Waste, Domestic and Commercial Wastewater		CH ₄	188	0.12%	99.94%
Industrial Processes, Nitric Acid Production		CO ₂	77.5	0.05%	99.99%
Waste, Industrial Wastewater		CH ₄	21	0.01%	100.00%

S.



R. FREQUENCY OF KEY SOURCES FOR THE REGION

Key source categories	Sector	Direct GHG	Countries for which this source category is key	Total no.
Enteric Fermentation of Domestic Livestock	Agric.	CH ₄	Albania, Armenia, Azerbaijan, Croatia, Georgia, Macedonia, Moldova, Mongolia, Slovenia, Tajikistan, Turkmenistan, Uzbekistan	12
Emissions Fuel Combustion (Road Transport)	Energy	CO ₂	Albania, Armenia, Azerbaijan, Croatia, Georgia, Macedonia, Moldova, Mongolia, Slovenia, Tajikistan, Turkmenistan, Uzbekistan,	12
Emissions from Solid Waste Disposal Sites	Waste	CH ₄	Albania, Armenia, Croatia, Georgia, Macedonia, Moldova, Mongolia, Turkmenistan, Uzbekistan	9
Fugitive Emissions from Oil and Gas Operation	Energy	CH ₄	Armenia, Azerbaijan, Croatia, Georgia, Moldova, Turkmenistan, Uzbekistan	8
Direct Emissions from Agriculture	Agric.	N ₂ O	Albania, Croatia, Georgia, Macedonia, Moldova, Mongolia, Tajikistan, Uzbekistan	8
Emissions from Fuel Combustion (Energy Industries)	Energy	CO ₂	Albania, Azerbaijan, Mongolia, Slovenia, Tajikistan, Turkmenistan, Uzbekistan	7
Emissions from Stationary Combustion (Manufacturing and Construction)	Energy	CO ₂	Azerbaijan, Macedonia, Moldova, Slovenia, Tajikistan, Turkmenistan, Uzbekistan	7
Emissions from Stationary Combustion (Agriculture, Forestry and Fishing)	Energy	CO ₂	Albania, Azerbaijan, Georgia, Moldova, Tajikistan, Uzbekistan	6
Emissions from Stationary Combustion (Residential Sector)	Energy	CO ₂	Albania, Azerbaijan, Georgia, Moldova, Tajikistan, Uzbekistan	6
Emissions from Fuel Combustion (Commercial and Institutional Sectors)	Energy	CO ₂	Albania, Azerbaijan, Macedonia, Tajikistan, Uzbekistan	5
Cement Production	Industry	CO ₂	Armenia, Croatia, Moldova	3
Woody Biomass Burned for Energy	Energy	CO ₂	Albania, Armenia, Macedonia	3
Fugitive emissions: solid fuels	Energy	CH ₄	Slovenia, Macedonia	2
Emissions from Industry: Iron and Steel Production	Energy	CO ₂	Georgia, Moldova	2
Emissions from Stationary Combustion (Gas)	Energy	CO ₂	Armenia, Croatia	2
Emissions from Stationary Combustion (Electricity, Heating)	Energy	CO ₂	Georgia, Moldova	2
Mobile Combustion - Domestic Aviation	Energy	CO ₂	Croatia, Georgia	2
Manure Management	Agric.	CH ₄	Georgia, Tajikistan	2
Manure Management	Agric.	N ₂ O	Croatia, Slovenia	2
Indirect emissions from Agriculture	Agric.	N ₂ O	Croatia, Moldova	2
Industrial Processes	Industry	CO ₂	Albania	1

Emissions from Stationary Combustion (Natural Gas)	Energy	CO ₂	Armenia	1
Emissions from Stationary Combustion (Coal)	Energy	CO ₂	Croatia	1
Emissions from Stationary Combustion (Other)	Energy	CO ₂	Azerbaijan	1
Fuel Combustion in Industry	Energy	CO ₂	Albania	1
Emissions from Stationary Combustion (Kerosene)	Energy	CO ₂	Armenia	1
Emissions from Stationary Combustion (Oil)	Energy	CO ₂	Croatia	1
Emissions from Natural Gas Scrubbing	Energy	CO ₂	Croatia	1
Ammonia Production	Industry	CO ₂	Croatia	1
Agricultural Residue Burning	Agric.	CO ₂	Georgia	1
Machine Building and Metal Working	Energy	CO ₂	Georgia	1
Food Industry	Energy	CO ₂	Georgia	1
Energy Industries: Liquid Fuels	Energy	CO ₂	Macedonia	1
Energy Industries: Solid Fuels	Energy	CO ₂	Macedonia	1
Mineral Products	Industry	CO ₂	Macedonia	1
Industrial Processes (Aluminium Production)	Industry	CO ₂	Tajikistan	1
Nitric Acid Production	Industry	N ₂ O	Croatia	1
Industrial Waste Water Handling	Waste	CH ₄	Georgia	1
Emissions from Iron and Steel Production	Energy	CO ₂	Croatia	1
Industry: Chemical Production	Energy	CO ₂	Georgia	1
Machine Building and Metal Working Industry	Energy	CO ₂	Georgia	1
Solvent and Other Product Use	Other	CH ₄	Slovenia	1
Solvent and Other Product Use	Other	N ₂ O	Slovenia	1
Energy: other sectors	Energy	CO ₂	Slovenia	1
Direct Emissions from Agriculture	Agric.	CO ₂	Uzbekistan	1
Industrial processes: Mineral Products	Industry	CO ₂	Slovenia	1
Fugitive Emissions from Coal Mining and Handling	Energy	CH ₄	Mongolia	1

T. TRAINING TOOLS FOR GOOD PRACTICE GUIDANCE AND UNCERTAINTY MANAGEMENT IN NATIONAL GREENHOUSE GAS INVENTORIES

Objective

The National Communications Support Unit (NCSU) aims to enhance the capacity of non-Annex I Parties to the United Nations Framework Convention on Climate Change (UNFCCC) to prepare their National Communications. The objective of this training package, "*Training Tools for Good Practice Guidance and Uncertainty Management in National Greenhouse Gas Inventories*", is to provide non-Annex I Parties with practical means to implement technical guidance of the Intergovernmental Panel for Climate Change (IPCC) as recommended by the UNFCCC. 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. Over the longer term, the use of this training package will improve the quality of greenhouse gas (GHG) inventories in national communications.

Background

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.

The *Good Practice Guidance and Uncertainty Management in National Greenhouse Gas Inventories* (IPCC, 2000) provides good practice guidance (GPG) to assist countries in producing inventories that are neither over nor underestimates, so far as can be judged, and in which uncertainties are reduced as far as practicable. The GPG supports the development of inventories that are transparent, documented, consistent over time, complete, comparable, assessed for uncertainties, subject to quality control and quality assurance, and efficient in the use of resources.

Non-Annex I Parties are encouraged to apply GPG during inventory preparation²², as appropriate and to the extent possible, as it is recognised that applying GPG could assist these Parties in developing inventories that better reflect their national circumstances.

Outputs

The Training Package is designed as a complementary tool to the IPCC 1996 *Revised Guidelines for National Greenhouse Gas Inventories* and the *GPG*. The package will consist of:

- 1) a practical Workbook Syllabus to complement the IPCC guidelines;
- 2) a CD-Rom containing supplemental tools and resources;
- 3) overheads for workshop training; and, potentially,
- 4) a CD-Rom/internet interactive training module (tentative).

Workbook and workshop overheads: Design and Approach

Phase I

The Workbook will summarise the key points of the GPG *that have relevance for non-Annex I Parties* in a practical manner; each chapter cross-references the GPG and retains key information such as decision trees and formulae. The content and approach were devised in conjunction with the IPCC and the UNFCCC.

Seventeen non-Annex I experts took lead authoring roles in drafting the Workbook and the overheads; 17 Annex I experts were assigned lead review roles. An additional 50 non-Annex I and Annex I experts were

²² FCCC/SBSTA/2000/L.3.

invited to review the draft chapters of the Workbook. All review comments were incorporated. The materials can be accessed at the following website: www.undp.org/cc/gpg.htm

Phase II

The need for additional source-specific guidance has been identified to finalise the workbook and overheads. The additional materials will be circulated for global review through the NCSU network prior to testing at the project start-up workshop and a final technical review. Phase II is planned for completion in December 2002.

All materials under development can be accessed at the following website: www.undp.org/cc/gpg.htm

CD-Rom of supplemental materials

Countries and organisations will be invited to submit tools, methods and approaches, and resources for a CD-Rom of supplemental materials to support inventory preparation. The Australian and Swiss governments and ETC/ACC have already identified tools for the CD-Rom.

U. TERMS OF REFERENCE

PROJECT MANAGER

A Project Manager (PM) will be hired to oversee project implementation, under the supervision of UNOPS and the UNDP. He/she will be responsible for the overall management of all aspects of the project, and will provide technical assistance to the national teams of the 12 participating countries: Albania, Armenia, Azerbaijan, Croatia, Georgia, Macedonia, Moldova, Mongolia, Tajikistan, Turkmenistan, Slovenia and Uzbekistan.

The candidate should be highly motivated, enthusiastic, and capable of working independently. He/she should have a strong scientific/technical and policy background, preferably in all sectors of national greenhouse gas inventories, but particularly in energy or waste. The ability to work with a wide variety of people from governments, agencies, non-governmental organisations, and research institutions is essential. A good understanding of the institutional framework in Europe/Commonwealth of Independent States is highly desirable. Must be able to draft fluently in English and, ideally, in Russian. The RPM will be based at the Regional Environment Center in Szentendre, Hungary. Specific duties are listed below.

Duties

- ?? Manage the Regional Co-ordination Unit staff and budget
- ?? Prepare a detailed annual workplan for the project activities to be carried out at the regional level, in close consultation with the NCSU Chief Technical Advisor and with the national focal points
- ?? Prepare a monitoring and evaluation plan to ensure adequate and timely assessment of project activities
- ?? Assist national focal points in the preparation and implementation of country-specific annual workplans
- ?? Co-ordinate all project activities with national team leaders, and a range of institutions and agencies, including UNDP country offices, UNEP, IPCC, UNFCCC, GEF, and national institutions
- ?? Foster and establish links with related national and regional projects, and other international programmes; identify long-term sources of funding and establish linkages with IFIs
- ?? Ensure that approaches used by countries for compiling, archiving, updating, and managing greenhouse gas inventories are consistent with the project document and with IPCC guidance
- ?? Provide assistance to national teams in the use of the IPCC Good Practice Guidance and in the selection and application of approaches to improve methodologies and emission factors
- ?? Supervise Regional Co-ordination Unit staff, and international and regional consultants who are recruited to provide technical assistance
- ?? Oversee the creation of a regional information exchange system to facilitate information dissemination at the national, regional and international level
- ?? Organise training activities related to individual project components
- ?? Organise regional workshops under the project, including agendas, resource persons and participants, in close consultation with the NCSU Chief Technical Advisor
- ?? Prepare and oversee substantive and operational progress reports for the NCSU Chief Technical Advisor and the Project Steering Committee
- ?? Ensure the publication and dissemination of the reports identified as project outputs
- ?? Work closely with the UNDP Resident Representatives and Country Offices and the Executing Agency, especially in relation to disbursement of funds for project activities
- ?? Attend the UNFCCC Conference of the Parties to give a side event on presentation on the project, as described in the project document

Qualifications

- ?? An advanced science degree (MSc or PhD) in a subject related to environmental management

- ?? A minimum of 5 years of relevant experience in the field of climate change, with a focus on GHG inventories
- ?? Demonstrated successful leadership in the design and execution of international projects related to the field of climate change
- ?? Substantial experience in the methodologies for preparing GHG inventories (IPCC *Revised 1996 Guidelines*)
- ?? Familiarity with the IPCC manual, *Good Practice Guidance and Uncertainty Management in National Greenhouse Gas Inventories*
- ?? Familiarity with national communications, and with international negotiations and processes under the UNFCCC
- ?? Substantial experience in Government and in interdepartmental procedures
- ?? Ability in negotiation and conflict resolution
- ?? Familiarity with computers and word processing
- ?? Excellent knowledge of English (written and spoken)
- ?? Excellent knowledge of Russian (written and spoken) an asset

Duration

One year, renewable.

MEDIA/PUBLIC RELATIONS CONSULTANT

The Media/Public Relations Consultant will, under the supervision of the Project Manager, be responsible for developing an awareness-raising and media strategy to be implemented throughout the project lifetime. As explained in Output 2.1 and in Section F of this project document, the key component of this strategy will be a campaign to target policymakers and data providers on the importance of institutionalising the inventory process and on the multiple benefits of data collection. The consultant will prepare a regional campaign that can be adapted by each participating country for national circumstances. The consultant will also be responsible for planning a side-event at the UNFCCC Conference of the Parties to raise the profile of the project with government ministers and with potential donors.

Duties

The Media/Public Relations Consultant will have the following specific duties:

- ?? Design an awareness-raising campaign on inventory importance for two audiences: government ministers and data providers; several formats should be developed (e.g. conference presentation, brochures, video)
- ?? Plan a COP side-event to promote the project to government ministers and potential donors
- ?? Develop a strategy for fostering links with relevant national and regional projects, with other information networks established under regional or international programmes, and with the NGO community, in consultation with the Regional Project Manager and the Information Technology Expert
- ?? Develop a strategy for outreach to Annex I Parties, particularly Annex I Economies in Transition
- ?? Develop a strategy for creating partnerships with IFIs
- ?? Develop a strategy for ensuring maximum dissemination of project outputs and lessons learned

Qualifications

- ?? Advanced degree in journalism, marketing or public relations, or a directly related field
- ?? Demonstrated success in the design and execution of media campaigns
- ?? Familiarity with international negotiations and processes under the UNFCCC
- ?? Familiarity with climate change and inventory issues
- ?? Good understanding of institutional frameworks and media within the region, and of governmental and interdepartmental procedures
- ?? Familiarity with computers and word processing
- ?? Full fluency (spoken and written) in English and Russian

Duration: 4-8 weeks

SHORT-TERM TECHNICAL CONSULTANTS

Consultants will be contracted on a short-term, ad hoc basis, to provide technical assistance for project activities carried out at the national and/or regional level, and to give guidance or training on scientific or methodological aspects of project work.

The Project Manager will centralise all technical assistance and information requests from national focal points, hiring experts on a needs basis. The rationale for this approach is that it is assumed that, as all countries are commencing the project at the same time, they may encounter similar difficulties and/or require similar technical inputs. In addition, countries will be using many of the same international and regional data sources. Therefore, it will be more efficient to access this information as a group request, rather than through individual queries from each participating country.

Duties

It is anticipated that experts may be required for some or all of the following project activities. As some of these activities might be carried out through the Technical Advisory Panel, the Project Manager will liaise with the NCSU Chief Technical Advisor prior to hiring experts:

- ?? Identify sources of available data from prior and ongoing international and regional projects to fill data gaps (Activity 1.1.2)
- ?? Compile a document for widespread dissemination containing country solutions and best practices identified under this project for a) overcoming barriers to obtaining available data, including the use of legal and other regulatory approaches, and b) overcoming data gaps where data must be compiled or developed (Activities 1.1.5, 1.2.3, 1.4.2)
- ?? Disseminate regional and international experiences in legal and other regulatory approaches (e.g. voluntary agreements) to overcoming barriers to data collection, and provide technical input to regional exchange workshop (Activity 1.4.2)
- ?? Advise on archiving tools and databases (Activity 1.3.1)
- ?? Train (trainers) in all aspects of IPCC Good Practice applications at regional workshops (Activities 3.2.3, 3.2.4, 3.2.5)
- ?? Technical review of key source inventories (Activity 3.2.6)
- ?? Provide technical input to work on improving or developing regionally-significant emission factors, consistent with IPCC guidance on methodologies (Activity 4.2.6)
- ?? Advise on harmonisation of approaches to emission factor improvement to allow improved comparisons between countries (Activity 4.2.1, 4.2.6, 4.3.3)
- ?? Act as resource persons at regional workshops, preparing technical materials and presentations.

The Project Manager will prepare detailed Terms of Reference prior to hiring any experts, as specific expert needs arise. The use of regional experts is strongly encouraged, where possible.

Qualifications

- ?? An advanced post-graduate university degree in a subject related to climate change and/or environmental management, or equivalent work experience
- ?? Substantial knowledge of methodologies for inventories (*IPCC Revised 1996 Guidelines* and *Good Practice Guidance*)
- ?? Familiarity with international negotiations and processes under the UNFCCC
- ?? Familiarity with computers and word processing
- ?? Understanding of written English and/or Russian

Duration: Dependent upon final Terms of Reference.

NATIONAL INVENTORY TEAM LEADER

To implement this project at the national level, a part-time National Inventory Team Leaders will be designated in the 12 participating countries: Albania, Armenia, Azerbaijan, Croatia, Georgia, Macedonia, Moldova, Mongolia, Tajikistan, Turkmenistan, Slovenia and Uzbekistan. Reporting to the Project Manager, each National Inventory Team Leader will be responsible for overseeing the implementation of national activities as described in the project document and national workplan. He/she will provide technical guidance and supervise the work of the experts and the national institutions involved in the project.

One prerequisite is that the National Inventory Team Leader must have been substantially involved in preparing the inventory for the First National Communication. It is envisaged that this person will be the inventory team leader for the first National Communication.

Some countries may choose to have the national project co-ordinator of the climate change enabling activity (CCEA) carry out the managerial aspects of the duties described below, while the national inventory team leader carries out the technical and supervisory aspects. The specific duties of the National Inventory Team Leader are as follows:

Managerial Duties

- ?? Prepare a detailed workplan for national activities, consulting with the Project Manager and all participating countries on the timing of compulsory project activities (2.5 days)
- ?? Prepare a monitoring and evaluation programme to ensure timely assessment of project activities (0.5 days)
- ?? Assist in the UNDP contracting of national institutions to carry out project activities, through the appropriate government channels (up to 2 days)
- ?? Work closely with the UNDP country office in the disbursement of funds related to project activities (as part of contracting duties, above)
- ?? Prepare quarterly progress reports for the Project Manager and for the national Project Steering Committee (12 reports, 6 days total)
- ?? Ensure all national project outputs are sent to the Project Manager for dissemination through the regional information exchange (as part of reporting duties, above)
- ?? Ensure adequate co-ordination with relevant national institutions and government ministries to ensure that project activities are distinct and fully complementary to other national initiatives, particularly the Second National Communication (up to 12 days)

Technical and Supervisory Duties

- ?? Oversee a programme for archiving and documenting all project outputs (up to 5 days)
- ?? Identify training needs at contracted national institutions and for other project stakeholders, as described in the project document, and prepare a training programme (5 days)
- ?? Ensure that the contracted national institutions are familiar with the application of IPCC Good Practice Guidance and with the approaches to be used for developing emission factors (10 days)
- ?? Review all national inventory information generated during the project (periodic, up to 12 days)
- ?? Provide substantive comments on any technical materials generated from regional project activities, as requested by the Project Manager (ad hoc, up to 10 days)
- ?? Attend regional exchange workshops and contribute with preparation of technical papers
- ?? Ensure the publication and dissemination of the national outputs identified in the project document (3 days)

The National Inventory Team Leader may also be involved in additional, substantive technical work under the regional project. However, it is not anticipated that this post will be full-time.

Qualifications

- ?? An advanced post-graduate university degree in a subject related to climate change and/or environmental management, or equivalent work experience
- ?? A minimum of 3 years of relevant experience in a field related to climate change
- ?? Demonstrated ability to manage and supervise climate projects
- ?? Substantial involvement in the preparation of the national GHG inventory and the initial National Communication is mandatory
- ?? Substantial knowledge of methodologies for inventories (*IPCC Revised 1996 Guidelines* and *Good Practice Guidance*)
- ?? Substantial experience in Government and in interdepartmental procedures preferred
- ?? Familiarity with international negotiations and processes under the UNFCCC preferred
- ?? Familiarity with computers and word processing
- ?? Understanding of written English

Duration: The managerial functions under this regional project are estimated at 23 working days in total. The technical and supervisory functions under this regional project are estimated at 45 workings days in total.

No project staff can be simultaneously employed by government, in line with UNDP rules and regulations.

It is not possible for the project co-ordinator and the national inventory team leader to work simultaneously on this regional project and on top-ups or Second National Communications. Instead, these positions will be paid in part from the project, and in part from the enabling activity funds, according to the number of days worked.

NATIONAL INSTITUTIONS

To implement this project at the national level, national institutions will be subcontracted to execute specific project activities in the 12 participating countries: Albania, Armenia, Azerbaijan, Croatia, Georgia, Macedonia, Moldova, Mongolia, Tajikistan, Turkmenistan, Slovenia and Uzbekistan.

Subcontracts may be executed with individual institutions, agencies, universities, NGOs or other recognised legal entities to perform specific activities outlined in the project document. The National Inventory Team Leader will co-ordinate the technical outputs of the national institutions, ensuring that these feed into the project at the national and regional level in a timely basis. The National Inventory Team Leader will select the appropriate institutions in close consultation with the National Steering Committee, based upon the sectors identified as regional priorities and in accordance with the national workplans. In select cases, national experts may be identified to carry out national project activities.

The budgets proposed by the sub-contractors will be carefully assessed to ensure the maximum use of national consultants and the transfer of benefits to the countries. Sub-contracts will be subject to UN rules and regulations, and will be based upon specific terms of reference agreed prior to contract execution.

The activities undertaken by the national institutions will primarily be in two areas: 1) strengthening institutional arrangements for compiling, archiving, updating and managing GHG inventories, and 2) improving emission factors. The institutions should prepare technical material, information and progress reports as requested for dissemination nationally and regionally. Particular duties may be as follows:

- ?? Gather available data from national sources to fill inventory data gaps
- ?? Identify barriers to obtaining existing data for key sources and propose solutions
- ?? Identify and develop methods for overcoming inventory data gaps if there is no available data
- ?? Archive relevant data for the project duration
- ?? Document the selection processes, methodologies and assumptions used for data collection and emission factor development
- ?? Analyse different approaches and methods for project activities and make recommendations, taking into account national circumstances, resources and information available
- ?? Identify areas where recalculations are necessary, and advise the National Team Leader on the appropriate strategy to ensure consistency
- ?? Compile key source inventory for peer review; carry out peer reviews
- ?? Assess suitability for national use of emission factor methodologies disseminated under the project
- ?? Improve and/or develop regionally-significant emission factors, consistent with IPCC guidance, in liaison with other participating countries
- ?? Attend project training activities and contribute to discussions through the preparation of technical papers

Qualifications

The institutions contracted for undertaking project activities should meet the following minimum criteria:

- ?? Sound and broadly-recognised scientific expertise on climate research
- ?? Prior experience in inventory preparation, through involvement in the initial National Communication
- ?? Highly qualified scientists working in the fields of emission factor development or data collection methods
- ?? Familiarity with the United Nations Framework Convention on Climate Change and with the political, technical, and scientific issues involved in the preparation of GHG inventories

Duration

Ad hoc basis throughout the project duration. Will be defined, based upon specific Terms of Reference developed by the National Inventory Team Leader during the start-up phase of the project.

TECHNICAL ADVISORY PANEL

The UNDP/NCSU will establish a Technical Advisory Panel (TAP) for the 3-year duration of the project. The Group will be chaired by the Project Manager, under the supervision of the NCSU. The TAP will provide technical guidance to national climate change teams on issues related to the quality of national GHG inventories at strategic points during the project. The TAP's function is primarily supervisory and advisory. Day-to-day technical assistance needs for project activities will be met through the short-term consultants hired by the Project Manager.

The size of the TAP is expected to be about 10, but may expand as new issues are identified during the project. Members will be identified according to the regional priorities; including Annex I and non-Annex I experts for each of the sectors to be studied under this project, plus 1-2 experts on cross-cutting issues. The UNFCCC Secretariat and the IPCC Inventory Task Force Bureau will also be invited to participate.

No travel is anticipated for the TAP. Communication will be via email and teleconferencing. It is anticipated that the TAP will participate in around four teleconferences per year, although 1-2 additional meetings may be required during the project start-up phase.

Duties

- ?? Advise on selection and application of appropriate inventory methodologies
- ?? Review data sources identified by countries for possible application in inventory methodologies
- ?? Recommend sources of emission factor and activity data, and data collection procedures
- ?? Recommend methodologies for developing or improving emission factors and activity data, where data gaps exist
- ?? Review emission factors and activity data developed under this project
- ?? Recommend appropriate archiving tools
- ?? Ensure linkages with other international activities, such as the IPCC emission factor database, the UNFCCC reporting format, EU database
- ?? Help develop the regional workshop agendas and suggest resource team experts for these workshops
- ?? Participate at email conferences and conference calls as necessary

Qualifications

- ?? Advanced science degree (MSc or PhD) in a subject related to climate change and environmental management
- ?? Five to 10 years' of work experience in GHG inventories
- ?? Specific inventory experience in one or more of the following source categories: waste treatment, oil/gas/coal fugitive emissions, enteric fermentation, and mobile sources
- ?? Experience in developing national inventory systems and managing inventory data
- ?? Experience in the UNFCCC inventory preparation and review process
- ?? Working knowledge of the *IPCC 1996 Revised Guidelines* and the *IPCC Good Practice Guidance and Uncertainty Management in GHG Inventories*
- ?? Ability to review inventory-related documents, and to provide ideas for improving the emission factors, activity data, and national inventory systems
- ?? Project experience with non-Annex I Parties and Economies in Transition
- ?? Proficiency in spoken and written English essential and desirable in other UN languages (Russian, preferred)

V. PROJECT STEERING COMMITTEE

The regional Project Steering Committee (PSC) will be responsible for supervising project execution. This will include evaluating project outputs to ensure that project activities are being carried out in a timely manner and to acceptable levels of quality, and reviewing the status and needs of countries throughout project implementation.

The Regional Project Manager will chair the PSC. It is envisaged that the PSC will meet by teleconference four times a year, or during regional exchange workshops. No other travel is anticipated. One to two additional teleconferences may be convened during the start-up phase of the project, if required. The PSC will be comprised of:

- ?? Project Manager
- ?? UNDP-GEF representatives (NCSU and/or regional co-ordinator)
- ?? Executing Agency (UNOPS) and the REC
- ?? RBEC Regional Support Centre representative (e.g. SURF)
- ?? Four national focal points (representation changing on an annual rotating basis).

The PSC responsibilities will include the following:

- ?? Monitoring and reviewing the progress of the project against its stated outputs, including progress reports prepared by the Project Manager;
- ?? Reviewing and approving the project workplan;
- ?? Reviewing and approving the monitoring and evaluation timetable;
- ?? Making modifications, as necessary, to the number and scope of regional workshops being organized under the project;
- ?? Making modifications, as necessary, to activities and outputs in order to achieve the project's objectives.

Overall responsibility for reporting to the PSC shall lie with the Project Manager. Each national focal point will prepare a progress report and a financial report on a quarterly basis and submit these to the Project Manager. The Project Manager will circulate a synthesis of the national reports as part of his/her quarterly progress report to the PSC, prior to teleconferences.

U. REGIONAL SUMMARY OF EMISSIONS

Country	Base	Emission source, by Sector										Net Sink	Gross	Net Total
	Year	Energy		Industrial		Agriculture		LUCF		Waste			Emissions	Emissions
		Gg ¹	% ²	Gg ¹	% ²	Gg ¹	% ²	Gg ¹	% ²	Gg ¹	% ²	Gg ¹	Gg ¹	Gg ¹
Albania	1994	3,105	42	210	3	1,879	26	1,811	25	340	5	286	7,345	7,059
Armenia ³	1990	23,108	91	630	2	1,039	4	0	0	536	2	617	25,312	24,695
Azerbaijan ³	1990	52,710	87	1,444	2	4,685	8	0	0	1,924	3	3,509	60,763	57,254
Croatia ³	1994	15,499	71	2,317	11	3,109	14	0	0	937	4	6,505	21,862	15,357
Georgia	1990	36,131	78	1,546	3	4,636	10	1,011	2	3,030	7	12,389	46,354	33,965
Macedonia	1994	9,802	70	991	7	1,997	14	89	1	1,135	8	1,820	14,014	12,194
Moldova	1994	12,039	79	688	5	1,784	12	241	2	509	3	1,719	15,261	13,542
Mongolia	1994	8,977	43	95	0.5	5,185	25	6,299	31	88	0.4	5,899	20,644	14,745
Slovenia	1994	13,967	75	786	4	1,657	9	1,094	6	1,017	5	5,332	18,521	13,189
Tajikistan ³	1994	6,470	67	498	5	2,510	26	0	0	126	1	2,758	9,604	6,846
Turkmenistan ³	1994	48,915	94	840	2	2,331	4	0	0	219	0.4	0	52,305	52,305
Uzbekistan ³	1990	135,738	83	6,940	4	17,396	11	0	0	3,130	2	421	163,204	162,783
Uzbekistan ³	1994	127,854	83	5,020	3	18,016	12	0	0	3,262	2	399	154,152	153,753
Regional total		366,460	81	16,985	4	48,207	11	10,546	2	12,991	3	41,255	455,189	413,934
Notes:														
1. Gg in CO2 equivalent; 2. Percentage of gross emissions; 3. No LUCF emissions reported.														
Source: Draft Inventory of Albania; First National Communication of Armenia; First National Communication of Azerbaijan; First National Communication of Croatia; First National Communication of Georgia; Draft Inventory of Macedonia; Draft Inventory of Moldova; First National Communication of Mongolia; Draft Inventory of Slovenia; Draft Inventory of Tajikistan; First National Communication of Turkmenistan; First National Communication of Uzbekistan.														