

Capacity Building for Improving the Quality of GHG Inventories (Europe/CIS)

STATUS OF COUNTRY PROGRESS & TECHNICAL ASSISTANCE NEEDS

April 2005

1. Background

Under the project, a regional programmatic approach was initiated to build capacity for improving the quality of data inputs to national greenhouse gas (GHG) inventories using the good practice guidance of the Intergovernmental Panel for Climate Change. The project builds 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 Second National Communications. Twelve countries are participating: Albania, Armenia, Azerbaijan, Croatia, Georgia, Macedonia, Moldova, Mongolia, Tajikistan, Turkmenistan, Slovenia and Uzbekistan.

There are four project objectives:

- Strengthen institutional arrangements for compiling, archiving, updating and managing greenhouse gas inventories;
- Create sustainable inventory processes;
- Enhance technical capacity for preparing national inventories; and
- Improve national methodologies and emission factors.

All participating countries are expected to produce nine main outputs under the project:

1. National manual of (inventory) procedures compiled
2. National emission factors and activity data documented and archived
3. 2-3 improved emission factors or activity data (regional key sources)
4. Uncertainties of key source emissions reduced
5. National inventory improvement strategy developed
6. National QA/QC plan elaborated
7. Peer review reports compiled
8. National experts trained in good practice
9. National awareness-raising campaign implemented

Country progress was assessed through the use of questionnaires circulated to national project co-ordinators, followed by one-on-one discussions with national expert teams during the Fourth Regional Workshop held in Moldova from April 20-22, 2005.

2. Project progress, by project output

Almost all countries reported good progress in the questionnaires, and the majority plan to complete their project outputs between December 05 and March 06. National financial expenditure reports support this assessment. However, experience has shown countries can be optimistic with their planning and most teams had not factored in time to respond to reviews of project outputs by the project's Technical Advisory Committee.

The completion status for the three key project outputs, as indicated in the questionnaires, is outlined below. The status of the other six project outputs can be found in Annex I.

National Manual of Procedures Compiled

Country	Completion Status (%)	Completion Date
Albania	90	Oct 05
Armenia	55	Dec. 05
Azerbaijan	50	Dec. 05
Croatia	90	Dec. 05
Georgia	60	Dec. 05
Macedonia	30	Mar 06
Moldova	70	Mar 06
Mongolia	65	Dec. 05
Slovenia	90	Sep 05
Tajikistan	40	Jul 05
Turkmenistan	65	Sep 05
Uzbekistan	40	Feb 06

National Inventory Improvement Strategy Developed

Country	Completion Status (%)	Completion Date
Albania	2nd draft	Jun 05
Armenia	60	Mar 06
Azerbaijan	50	Feb 06
Croatia	40	Dec 05
Georgia	60	Jul 05
Macedonia	60	Mar 06
Moldova	90	Mar 06
Mongolia	80	Oct 05
Slovenia	50	Dec 05
Tajikistan	75	Dec 05
Turkmenistan	70	Sep 05
Uzbekistan	60	Nov 05

National QA/QC plan elaborated

Country	Completion Status (%)	Completion Date
Albania	1st draft	Dec 05
Armenia	50	Mar 06
Azerbaijan	30	Mar 06
Croatia	80	Sep 05
Georgia	70	Oct 05
Macedonia	80	Mar 06
Moldova	60	Mar 06
Mongolia	80	Dec 05
Slovenia	90	Dec 05
Tajikistan	30	Dec 05
Turkmenistan	20	Oct 05
Uzbekistan	50	Oct 05

2.1 Submission of project outputs

While all countries are on track to complete all project outputs, the proposed completion dates (left) show that most countries were planning to submit the majority of their project outputs between December 05 and March 06. Not only does this leave very little time for countries to revise these outputs, based upon the review comments of the project Technical Advisory Committee, it also creates a burden on the Committee to review so many documents in such a short space of time. In addition, it is optimal that a level of quality control has taken place prior to the regional peer review.

It was agreed at the regional workshop in Moldova that countries must submit one each of the three main outputs (manual of procedures, inventory improvement strategy and QA/QC plan) -- in any order -- in June, October and December 2005.

In addition, the following dates were set:

- National Inventory Report¹
(2 key sources): July 05
- National Inventory Report¹
(1-2 key sources): September 05
- Regional Peer Review: January 06

These revised dates will allow for a more orderly flow of outputs to the Technical Advisory Committee and will help ensure countries have sufficient funds to revise the outputs accordingly.

¹ Will include the key source inventory and uncertainty analysis.

3. Project progress, by country

Each country's progress, as reported in the questionnaires, is outlined below. Most countries can report real achievements, and there are some outstanding products. There are two countries which may have particular problems:

Azerbaijan: Although the team has verbally reported a great deal of work, it has not been adequately documented.

Turkmenistan: Lagging by 1 year because the initial project manager had to be replaced. The country is doing good work and should be able to complete most products, but might not be able to improve emission factors.

ALBANIA (Mid-term expenditure: \$31,272, or 51% of national project funds)

Mandatory project output	Comple't'n Status (%)	Comple't'n Date
National manual of inventory procedures compiled	90	Oct 05
National emission factors/activity data documented and archived	100	Completed
2-3 improved emission factors/activity data	--	--
Uncertainties of key source emissions reduced	Partially	Dec 05
Inventory improvement strategy developed	2nd draft	Jun 05
National QA/QC plan elaborated	1st draft	Dec 05
Peer review reports compiled	QA/QC	Dec 05
National experts trained in good practice	70	Dec 05
Awareness campaign implemented	In progress	Dec 05

ARMENIA (Mid-term expenditure: \$23,105, or 37% of national project funds)

Mandatory project output	Comple't'n Status (%)	Comple't'n Date
National manual of inventory procedures compiled	55	Dec. 05
National emission factors/activity data documented and archived	80	Mar 06
2-3 improved emission factors/activity data	60	Sep 05
Uncertainties of key source emissions reduced	60	Mar 06
Inventory improvement strategy developed	60	Mar 06
National QA/QC plan elaborated	50	Mar 06
Peer review reports compiled	50	Dec 05
National experts trained in good practice	80	Mar 06
Awareness campaign implemented	40	Feb 06

AZERBAIJAN (Mid-term expenditure: \$29,273, or 48% of national project funds)

Mandatory project output	Comple't'n Status (%)	Comple't'n Date
National manual of inventory procedures compiled	50	Dec. 05
National emission factors/activity data documented and archived	90	Mar 06
2-3 improved emission factors/activity data	60	Sep 05
Uncertainties of key source emissions reduced	80	Dec 05
Inventory improvement strategy developed	50	Feb 06
National QA/QC plan elaborated	30	Mar 06
Peer review reports compiled	50	Mar 06
National experts trained in good practice	80	Nov 05
Awareness campaign implemented	70	Mar 06

CROATIA (Mid-term expenditure: \$47,690, or 49% of national project funds)

Mandatory project output	Comple't'n Status (%)	Comple't'n Date
National manual of inventory procedures compiled	90	Dec. 05
National emission factors/activity data documented and archived	100	Completed
2-3 improved emission factors/activity data	40	Sep 05
Uncertainties of key source emissions reduced	100	Completed
Inventory improvement strategy developed	40	Dec 05
National QA/QC plan elaborated	80	Sep 05
Peer review reports compiled	100	Completed
National experts trained in good practice	30	Mar 06
Awareness campaign implemented	60	Mar 06

GEORGIA (Mid-term expenditure: \$32,827, or 53% of national project funds)

Mandatory project output	Comple't'n Status (%)	Comple't'n Date
National manual of inventory procedures compiled	60	Dec. 05
National emission factors/activity data documented and archived	50	Dec 05
2-3 improved emission factors/activity data	90	Mar 06
Uncertainties of key source emissions reduced	70	Mar 06
Inventory improvement strategy developed	60	Jul 05
National QA/QC plan elaborated	70	Oct 05
Peer review reports compiled	10	Oct 05
National experts trained in good practice	90	Jun 06
Awareness campaign implemented	60	Jun 06

MACEDONIA (Mid-term expenditure: \$29,256, or 47% of national project funds)

Mandatory project output	Comple't'n Status (%)	Comple't'n Date
National manual of inventory procedures compiled	30	Mar 06
National emission factors/activity data documented and archived	100	Completed
2-3 improved emission factors/activity data	30	Sep 05
Uncertainties of key source emissions reduced	30	Dec 05
Inventory improvement strategy developed	60	Mar 06
National QA/QC plan elaborated	80	Mar 06
Peer review reports compiled	70	Sep 05
National experts trained in good practice	50	Mar 06
Awareness campaign implemented	50	Mar 06

MOLDOVA (Mid-term expenditure: \$29,505, or 48% of national project funds)

Mandatory project output	Comple't'n Status (%)	Comple't'n Date
National manual of inventory procedures compiled	70	Mar 06
National emission factors/activity data documented and archived	80	Jun 05
2-3 improved emission factors/activity data	80	Sep 05
Uncertainties of key source emissions reduced	80	Sep 05
Inventory improvement strategy developed	90	Mar 06
National QA/QC plan elaborated	60	Mar 06
Peer review reports compiled	50	Jun 05
National experts trained in good practice	50	Mar 06
Awareness campaign implemented	50	Jun 06

MONGOLIA (Mid-term expenditure: \$23,655, or 38% of national project funds)

Mandatory project output	Comple't'n Status (%)	Comple't'n Date
National manual of inventory procedures compiled	65	Dec. 05
National emission factors/activity data documented and archived	65	Mar 06
2-3 improved emission factors/activity data	70	Dec 05
Uncertainties of key source emissions reduced	70	Feb 06
Inventory improvement strategy developed	80	Oct 05
National QA/QC plan elaborated	80	Dec 05
Peer review reports compiled	80	Mar 06
National experts trained in good practice	75	Feb 06
Awareness campaign implemented	65	Apr 06

SLOVENIA (Mid-term expenditure: \$73,303, or 76% of national project funds)

Mandatory project output	Comple't'n Status (%)	Comple't'n Date
National manual of inventory procedures compiled	90	Sep 05
National emission factors/activity data documented and archived	100	Mar 04
2-3 improved emission factors/activity data	100	Mar 04
Uncertainties of key source emissions reduced	70	Oct 05
Inventory improvement strategy developed	50	Dec 05
National QA/QC plan elaborated	90	Dec 05
Peer review reports compiled	70	Jun 06
National experts trained in good practice	50	Feb 06
Awareness campaign implemented	30	Jun 06

TAJIKISTAN (Mid-term expenditure: \$30,858, or 50% of national project funds)

Mandatory project output	Comple't'n Status (%)	Comple't'n Date
National manual of inventory procedures compiled	40	Jul 05
National emission factors/activity data documented and archived	40	Dec 05
2-3 improved emission factors/activity data	50	Dec 05
Uncertainties of key source emissions reduced	30	Dec 05
Inventory improvement strategy developed	75	Dec 05
National QA/QC plan elaborated	30	Dec 05
Peer review reports compiled	30	Dec 05
National experts trained in good practice	70	Dec 05
Awareness campaign implemented	50	Dec 05

TURKMENISTAN (Mid-term expenditure: \$25,990, or 42% of national project funds)

Mandatory project output	Comple't'n Status (%)	Comple't'n Date
National manual of inventory procedures compiled	65	Sep 05
National emission factors/activity data documented and archived	70	Jul 05
2-3 improved emission factors/activity data	10	Dec 05
Uncertainties of key source emissions reduced	15	Dec 05
Inventory improvement strategy developed	70	Sep 05
National QA/QC plan elaborated	20	Oct 05
Peer review reports compiled	0	Dec 05
National experts trained in good practice	60	Oct 05
Awareness campaign implemented	30	Nov 05

UZBEKISTAN (Mid-term expenditure: \$38,939, or 63% of national project funds)

Mandatory project output	Comple't'n Status (%)	Comple't'n Date
National manual of inventory procedures compiled	40	Feb 06
National emission factors/activity data documented and archived	60	Jul 05
2-3 improved emission factors/activity data	90	Jun 05
Uncertainties of key source emissions reduced	60	--
Inventory improvement strategy developed	60	Nov 05
National QA/QC plan elaborated	50	Oct 05
Peer review reports compiled	60	Sep 05
National experts trained in good practice	60	Nov 05
Awareness campaign implemented	80	Jun 06

4. Technical assistance needs

No countries reported a need for dedicated technical assistance. However based on certain workshop presentations and documentation submitted to the Regional Project Manager, some countries (such as Azerbaijan and Turkmenistan) may need additional help. Countries did request guidance materials, templates, an outline of how to report on project outputs and best practice examples from other countries. A summary of the identified technical assistance has been compiled in the table below. It was agreed that all additional documentation and guidance would be posted on the regional project website.

Mandatory project output	Level of Tech. Assist.	Type of Technical Assistance Needed	Additional documents to be provided
1. National manual of inventory procedures compiled	L	Expert feedback *	Template
2. National emission factors/AD documented and archived	L	Expert feedback *	Report format
3. 2-3 improved emission factors/AD	L	Expert feedback *	Report format (NIR)
4. Uncertainties of key source emissions reduced	L	Expert feedback *	Report format (NIR)
5. National long term inventory improvement strategy developed	M	Expert feedback *	Template + country examples
6. National QA/QC plan elaborated	M	Expert feedback *	Template + country examples
7. Peer review reports compiled	M-H	Training in peer review Expert feedback on review	Peer review questions Report format
8. National experts trained in good practice	L	None	Report format
9. Awareness campaign implemented	L	None	Awareness materials Report format

Where L = low; M = medium; H = high.

* Regional Project Manager requires interim draft for review by technical advisory committee

5. Conclusions

Given the difficulties of keeping 12 countries on the same timeline, the project is progressing smoothly. A few countries are lagging, and the best approach may be to provide best practice examples for them to follow (see recommendations, below). Many countries are about to begin Second National Communications, which could take over in priority from the regional project. It will be important to encourage countries to carry out both the project activities and the National Communication activities in a synergistic manner.

Countries have requested guidance for many aspects of the project. This has been provided in the form of expert assistance, but in the absence of standard templates. This approach has encouraged innovative thinking and countries have produced, for example, manuals for procedures for the inventories that reflect national circumstances. Nonetheless, it is important that there is extensive sharing of project results, so that all countries can benefit from the best practices of others.

Finally, it is important to try and capture the lessons learned, best practices and project outputs from the countries. In this context, countries have been requested to provide an additional half-page report for each project output that expands on their experiences and successes and failures.

6. Recommendations

1. Improve the materials available on the website: Currently all workshop materials are posted on the web, but not templates and good practice examples from countries. It is recommended to provide at least two country examples – one example of the minimum quality standard required and one excellent example.

Examples of good practice include:

- Armenian approach to carrying out measurements for enteric fermentation studies;
- Design of manual of procedures using flow charts (Armenia);
- Preparation of National Inventory Report based on Annex I examples (Moldova);
- Moldovan waste measurement study;
- Georgian extrapolation of scientific reports for waste analysis; and
- Macedonian development of an Access database containing inventory data, sources and emission factors. The database includes tutorials and print screens and carries out QA verifications. Can export to IPCC worksheets and Corinair.

2. Hold 1 additional workshop to provide training on the peer review and QA/QC. This workshop was planned under the project, but had been cancelled due to insufficient funds (due in part to the decline of the \$). It is recommended to use the remaining PDF B funds to hold a small 2-day workshop with hands-on training.

3. Assess lessons learned and best practices and prepare end-of-project report. Given the innovative products from this project, it would be well worth considering preparing a report for circulation at the COP and for donors and the UNDP that captures the best practices and lessons learned and also the best products from this project. Such a report could also be very useful for all developing countries preparing National Communications.

Annex I: Project progress, by output**National Manual of Procedures Compiled**

Country	Completion Status (%)	Completion Date
Albania	90	Oct 05
Armenia	55	Dec. 05
Azerbaijan	50	Dec. 05
Croatia	90	Dec. 05
Georgia	60	Dec. 05
Macedonia	30	Mar 06
Moldova	70	Mar 06
Mongolia	65	Dec. 05
Slovenia	90	Sep 05
Tajikistan	40	Jul 05
Turkmenistan	65	Sep 05
Uzbekistan	40	Feb 06

Uncertainties of Key Source Emissions Reduced

Country	Completion Status (%)	Completion Date
Albania	Partially	Dec 05
Armenia	60	Mar 06
Azerbaijan	80	Dec 05
Croatia	100	Completed
Georgia	70	Mar 06
Macedonia	30	Dec 05
Moldova	80	Sep 05
Mongolia	70	Feb 06
Slovenia	70	Oct 05
Tajikistan	30	Dec 05
Turkmenistan	15	Dec 05
Uzbekistan	60	--

National emission factors and activity data documented and described

Country	Completion Status (%)	Completion Date
Albania	100	Completed
Armenia	80	Mar 06
Azerbaijan	90	Mar 06
Croatia	100	Completed
Georgia	50	Dec 05
Macedonia	100	Completed
Moldova	80	Jun 05
Mongolia	65	Mar 06
Slovenia	100	Mar 04
Tajikistan	40	Dec 05
Turkmenistan	70	Jul 05
Uzbekistan	60	Jul 05

National Inventory Improvement Strategy Developed

Country	Completion Status (%)	Completion Date
Albania	2nd draft	Jun 05
Armenia	60	Mar 06
Azerbaijan	50	Feb 06
Croatia	40	Dec 05
Georgia	60	Jul 05
Macedonia	60	Mar 06
Moldova	90	Mar 06
Mongolia	80	Oct 05
Slovenia	50	Dec 05
Tajikistan	75	Dec 05
Turkmenistan	70	Sep 05
Uzbekistan	60	Nov 05

National emission factors and activity data for key sources improved

Country	Completion Status (%)	Completion Date
Albania	--	--
Armenia	60	Sep 05
Azerbaijan	60	Sep 05
Croatia	40	Sep 05
Georgia	90	Mar 06
Macedonia	30	Sep 05
Moldova	80	Sep 05
Mongolia	70	Dec 05
Slovenia	100	Mar 04
Tajikistan	50	Dec 05
Turkmenistan	10	Dec 05
Uzbekistan	90	Jun 05

National QA/QC plan elaborated

Country	Completion Status (%)	Completion Date
Albania	1st draft	Dec 05
Armenia	50	Mar 06
Azerbaijan	30	Mar 06
Croatia	80	Sep 05
Georgia	70	Oct 05
Macedonia	80	Mar 06
Moldova	60	Mar 06
Mongolia	80	Dec 05
Slovenia	90	Dec 05
Tajikistan	30	Dec 05
Turkmenistan	20	Oct 05
Uzbekistan	50	Oct 05

Peer review reports compiled

Country	Completion Status (%)	Completion Date
Albania	QA/QC	Dec 05
Armenia	50	Dec 05
Azerbaijan	50	Mar 06
Croatia	100	Completed
Georgia	10	Oct 05
Macedonia	70	Sep 05
Moldova	50	Jun 05
Mongolia	80	Mar 06
Slovenia	70	Jun 06
Tajikistan	30	Dec 05
Turkmenistan	0	Dec 05
Uzbekistan	60	Sep 05

National experts trained in INV good practices

Country	Completion Status (%)	Completion Date
Albania	70	Dec 05
Armenia	80	Mar 06
Azerbaijan	80	Nov 05
Croatia	30	Mar 06
Georgia	90	Jun 06
Macedonia	50	Mar 06
Moldova	50	Mar 06
Mongolia	75	Feb 06
Slovenia	50	Feb 06
Tajikistan	70	Dec 05
Turkmenistan	60	Oct 05
Uzbekistan	60	Nov 05

Awareness Campaign Implemented

Country	Completion Status (%)	Completion Date
Albania	In progress	Dec 05
Armenia	40	Feb 06
Azerbaijan	70	Mar 06
Croatia	60	Mar 06
Georgia	60	Jun 06
Macedonia	50	Mar 06
Moldova	50	Jun 06
Mongolia	65	Apr 06
Slovenia	30	Jun 06
Tajikistan	50	Dec 05
Turkmenistan	30	Nov 05
Uzbekistan	80	Jun 06