

Note of JICA expert

# Enhancing governance through support for transparency

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*“Project for Capacity Development to Establish a National GHG Inventory Cycle of Continuous Improvement in Mongolia”*



## Key Words

- National Communications - from ad hoc research report to periodical administrative report.
- Continuity (including cost-effectiveness) over Accuracy.
- Support on GHG Inventory and MRV can include improvement of sectoral statistics.
- On-the-Job training is a key for GHG inventory compilers.
- Continuous improvement is a new challenge.
- Gradual approach may catalyze developing sustainable local MRV/Inventory systems.

## 1. Background

Submission of National Communications (NCs) is an obligation of Non-Annex I member countries under the United Nations Framework Convention on Climate Change (UNFCCC). Many experts were mobilized to understand domestic situations from the beginning, especially on national greenhouse gas (GHG) inventory which takes many years for each submission. Many capacity building opportunities were provided to Non Annex I member countries by the UNFCCC Consultative Group of Experts (UNFCCC CGEs), National Communications Support Programme (NCSP) and other initiatives mainly through workshops. However, outcomes of the 17th and 21st sessions of the Conference of the Parties to UNFCCC (COP17 and COP21) have a great influence on international reporting for Non Annex I countries, so that the traditional approach may need to be updated.

Japan International Cooperation Agency (JICA) has been implementing several capacity building projects on GHG inventory and Measurement, Reporting and Verification (MRV) in Vietnam, Indonesia, Mongolia and Papua New Guinea. This article extracts key ideas from these experiences for consideration in future projects to support MRV and/or GHG inventory in line with the latest international mitigation reporting requirements.

## 2. Common Challenges in Developing Countries

### (a) Timely Submission on Biennial Basis

The submission schedule of NCs of developing countries is decided in an ad hoc basis. Most developing countries have made two submissions between 1994 and 2011 based on the capacity of each country, and many obstacles were attributed to such an ad hoc arrangement. Thus, Non-Annex I member countries should rethink the domestic arrangements and put them in place to comply with the frequency of submission which has intensified into the biennial basis since COP17 [Biennial Update Report (BUR)] inherited by the Transparency Framework (TF) under the Paris Agreement (PA).

A totally different approach would be necessary to adapt to this intensified frequency. Timely and regular data collection, institutional memory on report compilation, as well as possible increase in domestic resource allocation, would be major issues.

### (b) Tracking Progress of Mitigation

Article 4.13 of the PA prescribes that the Parties should account for Nationally Determined Contribution (NDC) and Article 13.7 requires that member countries submit both national GHG inventory and information to track the progress of

implementation of the NDC, which will be the main sources of information for accounting.

The concept of MRV on mitigation actions was introduced in conjunction with Nationally Appropriate Mitigation Actions (NAMA) at COP13 as simplified Clean Development Mechanism (CDM) like project-base mitigation actions. Major interests of NAMA inventors were rather on accountability and/or validation aspects of their support and investment at project level in return to enhanced support. Monitoring of project/policy and credit/non credit mitigation actions have differences in information needs and level of rigidity; however, all of these tend to be mixed up, especially in recipient countries.

On the other hand, requirements for Non Annex I member countries under the UNFCCC negotiation tend to be less stringent in view of limited capacity to follow strict rules. Guidelines for domestic MRV can be pointed out as an example. It has been observed however, that countries sometimes faced difficulty in materializing relevant modalities into practice due to lack of clear guidance.

All of these contexts might have led to straightforward replication of project based MRV modalities which may require additional analysis to provide sufficient insight on economy-wide mitigation actions.

### (c) ICA, Review and Continuous Improvement

There used to be few feedbacks on submitted NCs from Non-Annex I member countries. However, it was observed in the International Consultation and Analysis (ICA) process that GHG inventory compilers in some countries struggled to respond to questions and comments from the Team of Technical Experts (TTE) during their first ICA meeting even though they were trained sufficiently to keep updating GHG inventory. It seems that they needed reference for adequate level of response during the Q&A as well as the compilation of draft summary report to the TTE at their first trial. The unpredictable nature of such Q&A can be a target for capacity building activity.

According to Article 13.11 of the PA, reports submitted under the TF are subject to “review” . This can be basically regarded as an activity similar to ICA. However, this wording implies that the output may have stronger influence on the report, leading to methodological improvement.

### (d) Endorsement Process of Outputs

Strictness on the endorsement of a report at the national level may vary among countries. Endorsements may take nearly half a year in some countries, and this will limit available time for biennial submission. This could also bring about obstacles to

internationally supported projects in particular, because the best estimate by donors may not always be endorsable by the government.

On the other hand, data that may be comfortable to the government might not be reliable enough for support planners. Therefore, legitimacy of data is indispensable to avoid keeping reports in the bookshelf.

### 3. Combining Support on Inventory and Statistics

Concerted support on GHG inventory and statistics will provide synergies of such as: more accurate data available on a regular basis with lower budgetary burden in total, data sets with time-series consistency and archiving, smoother official endorsement, and awareness raising of major GHG sources to relevant stakeholders.

National statistics cover major items which are important in terms of development in a country. IPCC GHG inventory guidelines have been designed to make full use of items that can be expected in national statistics in most countries to minimize inputs for data collection.

A certain amount of budget should be domestically allocated to collect statistical data for the sake of sustainable monitoring of the progress of a developmental goal. Efforts on data collection for GHG inventory may be streamlined into statistical data collection for another developmental monitoring purpose insofar as appropriate. Improvement of data may include creating new statistical items, improving accuracy, and breaking down of existing items for more detailed analysis.

After the GHG inventory project supported by JICA in Vietnam, it was observed that the Ministry of Natural Resources and Environment accelerated coordination with the General Statistical Office. In Indonesia, the JICA project developed regional statistics on solid waste together with the local environmental agency. In the GHG inventory project in Mongolia, JICA is supporting the institute delegated to prepare the national energy balance table in addition to the agency in charge of inventory compilation. This aspect should be also considered by donors when planning technical support on GHG inventory and/or MRV, because donors tend to propose a sophisticated web based data collection system for the sake of minimizing burden for data providers.

However, data collection merely for GHG calculation cannot be always justified to allocate limited national budget leading to lower sustainability in the system with high risk in data archiving. Line ministries would maintain such a system only if it collects data interesting in terms of their own mandates while affordable with their budget.

Data will be lost after years if they will not be collected on time

while methodological improvement (especially in emission factors) and recalculation can be done later to improve accuracy of GHG emissions. During the GHG inventory project in Vietnam, the project team faced difficulty in analysing 2005 data that breakdown of statistics for some important subcategories identified in 2010 were not available.

### 4. MRV and Article 13.7(b) of the Paris Agreement

#### (a) Streamlining MRV System

Many developing member countries submitted NDC with economy-wide mitigation targets and such countries are expected to increase over time based on the capacity of those countries. This is indispensable to achieve global 2°C goal. Article 13.7 requires countries to track progress and report it in line with the nature of submitted NDCs.

MRVs, or any reporting of mitigation actions, shall be designed to serve this purpose. Some mitigation actions may have relatively small contribution in terms of emission reduction, but still be important for achieving sector development. It is possible to include such efforts in their climate change action to be monitored; provided, that they will not bear additional cost.

Project oriented MRV modalities will become burdensome against such a wide implementation while accuracy of each result may not contribute much on GHG emission at national level. A looser monitoring and evaluation practice with simple GHG emission/mitigation quantification (e.g. progress indicator x emission reduction factor) can be a key to integrate as many relevant activities into the mitigation plan as possible.

Implementation of economy-wide mitigation actions requires mobilization of a wide range of domestic resources in addition to international support. Hence, they have to be incorporated with other development goals in which domestic resources can be mobilized easier than merely for GHG reduction. Usually, these developmental actions were monitored through national statistics.

In view of possible co benefits of mitigation action and development, it is always recommended to consider integration of statistical data with MRV as proposed for GHG inventory. This approach will pave way to integrate GHG inventory and MRV. They are usually apples and oranges in terms of quantification methodology, making it difficult to directly compare and evaluate impact of project base results to national level.

For example, irrigation to rice paddy is a major concern especially in Southeast Asia. At the same time, irrigated rice paddy is usually a key source of GHG emission in the region, so that irrigated (or cultivated) area of rice paddy is an important activity data of GHG inventory. An agricultural authority may

introduce and promote wet and dry rice cultivation method in order to improve productivity while reducing methane emission. However, this will require upgrade in irrigation infrastructure and additional training to farmers.

Statistics on irrigation may be established and/or broken down to indicate the area with the practice to monitor the progress, and this data can be also used as activity data for GHG inventory as well as MRV. Moreover, GHG emissions from agriculture usually have higher uncertainty due to natural fluctuation, making it difficult to conduct precise quantification as required for credit issuance.

### **(b) Piloting and Wide Application**

Piloting of MRV at project level may be useful in an early stage, especially, to identify data sources of activity data and to determine emission factors or emission reduction factors per unit of mitigation action in the specific region or country. It is ideal if such practices are oriented to develop a nationwide estimation methodology, possibly including country specific emission factor(s) for GHG inventory.

### **(c) Verification**

The word “verification” in MRV has been emphasized for the sake of accountability on investment as stated above. However, accuracy of emission reduction amount at project level may not contribute significantly for decision making on economy wide mitigation policies. If that is the case, simpler modalities should be considered in view of cost-effectiveness of mitigation actions. Economy-wide implementation would mean involvement of small-medium scale entities, while verification cost tends to be fairly heavy for small medium enterprises involved in CDM or European Union Emission Trading Scheme (EU ETS).

For example, the official endorsement process of sector results may be regarded as an alternative verification activity, because it will be accompanied by quality control check by line ministries. Comparison between the sum of bottom up emission reduction data from project/sector levels and GHG inventory and Business As Usual (BAU) of relevant categories may serve as another form of domestic validation for both data.

### **(d) Mitigation Action With or Without Support**

It is natural to predict that mitigation efforts with international support in developing countries will be subject to more rigid reporting in view of accountability of donor entities as previously described. On the other hand, there are some good reasons for Non-Annex I member countries to present conditional or unconditional targets separately.

There is still some time before the COP24 for detailed reporting requirements to be fixed. However, it was proposed in a negotiation text that the guidelines should be designed to facilitate assessment of the alignment of support to the implementation of developing country NDCs for conditional components. Such a request is reasonable from donors’ accountability point of view, though some additional methodologies on this specific subject need to be developed and applied for developing countries.

Theoretically speaking, domestic accountability of unilateral actions should be the major concern of domestic entities. Support on this aspect will be particularly important for proper implementation without international support in each developing country.

Moreover, accounting of projects co financed by both donor and recipient country may pose another difficulty in attribution. Non-Annex I member countries may consider unifying the national target into a single number to avoid such complexity in reporting.

### **(e) Accounting and Linkage between MRV and Inventory**

It is reasonable to assume that accounting modalities for developing member countries after 2020 may focus more on the progress of actions than GHG emission reduction based on inventory in view of limited capacity for timely preparation and accuracy of the national GHG inventory in many cases. Under such circumstances, it will be ideal if GHG inventory could serve as an overall reference as to whether or not claimed mitigation actions somehow affect the emission at the national level.

Methodologies for national GHG inventory and quantification of mitigation efforts are often different, reflecting difference in activity data. However, application of common coefficients and baseline data for quantification (e.g. GWP, carbon content of fuel wood, grid emission factor towards future, population prediction) across sectors will make these numbers more comparable to each other. There is no doubt that integration of GHG inventory and MRV through national statistics as stated above will serve for any form of accounting at both national and international levels.

In terms of accuracy of GHG inventory, there are many “Not Estimated” categories and categories with very large uncertainty due to lack of information but could have substantial impact to the national total, particularly, under the Agriculture, Forestry, and Other Land Use (AFOLU) sector. JICA is conducting a study on the emission/removal status of grasslands in Mongolia.



## 5. Review, Continuous Improvement and Recalculation

For the sake of “effective” compilation, ministries in charge of environmental issues and senior researchers were generally mobilized to compile NCs in early days. However, expert teams were disbanded when submissions are done so that much part of knowledge are lost from the government after then.

Such an approach will no longer be effective in view of biennial submissions. Not only compilation of report itself but also some relevant issues such as responding to review, planning continuous improvement and recalculation should be covered. Thus approaches to capacity building should be changed to respond to these requirements.

ICA was the first attempt by the UNFCCC to make comments officially on the submitted reports from developing member countries. It provided many Non Annex I member countries a good learning by doing experience on such a practice. Since some Non-Annex I member countries faced difficulty in this process, experience of Annex I member countries on responding to review will be valuable to be shared.

For sufficient capacity building in these aspects, following approaches may be considered: training for younger officers, on-the-job training on compiling reports and responding to ICA, and encouraging participants to apply for training courses on Annex I reviewers/TTE. Some of these activities may not be sufficiently conducted in a project period (typically less than four years), so that long-term platforms such as periodical workshops should complement them.

## 6. Conclusion

Most international support on GHG inventory and/or MRV in early days focussed only on the climate change aspect. These efforts supported the very first stage of international reporting. With the accumulated experience on the compilation of NCs/Biennial Update Reports (BURs) in developing countries together with the recent development in reporting requirements, approaches in these areas should be reconsidered to enhance the mainstreaming of mitigation and total effectiveness of international support. In other words, projects in these areas should be considered as entry points to the monitoring and evaluation process in broader sectors at the national level.

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## Disclaimer

This “Note of JICA expert” was prepared by Mr. Akihiro Tamai, with comments and suggestions from Dr. Masato Kawanishi (JICA Senior Advisor).

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