Information Matters
Transparency through Reporting

Information Matters: Viet Nam

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Second Capacity Building Mission, Viet Nam

Resort Flamingo Dai Lai, Vinh Phuc province, 7 – 8 March 2017

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Abbreviations

AFOLU	Agriculture, Forestry and Other Land Use
BAU	Business-as-usual
BUR	Biennial Update Report
BMUB	Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety
CGE	Consultative Group of Experts
DMHCC	Department of Meteorology, Hydrology and Climate Change
GHG	Greenhouse gases
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit GmbH
ICA	International Consultation and Analysis
IKI	International Climate Initiative
IM	Information Matters Project
IMHEN	Institute of Meteorology, Hydrology and Climate Change
LEAP	The Long-range Energy Alternatives Planning System
MA	Mitigation Action
MARD	Ministry of Agriculture and Rural Development
MOC	Ministry of Construction
MOIT	Ministry of Industry and Trade
MONRE	Ministry of Natural Resources and Environment
MOT	Ministry of Transport
MRV	Measurement, Reporting and Verification
NAMA	Nationally Appropriate Mitigation Actions
NC	National Communication
NDCs	Nationally Determined Contributions
QA	Quality Assurance
QC	Quality Control
Q&A	Questions and answers
TTE	Technical Team of Experts
UNFCCC	United Nations Framework Convention on Climate Change

Executive Summary

In the context of the Information Matters project (IM), the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH on behalf of and under the International Climate Initiative (IKI) of the Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety (BMUB) provides technical assistance to selected partner countries to improve climate change reporting and to comply with UNFCCC requirements. The project is currently in its second phase which addresses the four partner countries Colombia, Egypt, Georgia and Viet Nam. GIZ has subcontracted the Danish consulting firm NIRAS A/S as part of a consortium with IP Institut für Projektplanung GmbH (NIRAS team) for the provision of technical expertise. In Viet Nam, in line with the country specific needs, IM will provide the national partners led by the national climate change focal point – the Department of Meteorology, Hydrology and Climate Change (DMHCC) of the Ministry of Natural Resources and Environment (MONRE) with tailored technical support and training to enhance the elaboration of national reports to the UNFCCC. The IM technical support to Viet Nam is timely, as it supports the ongoing preparation of Viet Nam's second Biennial Update Report (BUR 2), with delivery expected in December 2017.

Previously, from 14 to 18 March 2016, a stock-taking mission in Viet Nam was conducted by the IM team comprising a number of meetings with key stakeholders to identify gaps and needs. Following that, GIZ officers and experts from the NIRAS team carried out a kick-off meeting and the first capacity building mission between 24 and 26 August 2016 at Song Hong Resort, Vinh Yen city, Vinh Phuc province. The summary and results of both missions were provided in separate reports.

This report summarises the second capacity building mission of the IM project in Viet Nam that took place between 7 and 8 March 2017 at Flamingo Dai Lai Resort, Vinh Phuc province. The training was co-organised by DMHCC and IM project in cooperation with the GIZ NAMA project (Creation of an Overarching Framework for NAMAs and MRV in Viet Nam) with special focus on mitigation actions (MAs) reporting for the BUR development. The participants invited to attend the training included representatives of the MONRE agencies DMHCC and Institute of Meteorology, Hydrology and Climate Change (IMHEN), as well as other line ministries involved in the BUR development processes (e.g. Ministry of Agriculture and Rural Development (MARD), Ministry of Industry and Trade (MOIT) Ministry of Transport (MOT) and Ministry of Construction (MOC)). National experts involved in elaboration and development of the current and previous National Communications (NCs) and BURs of Viet Nam as well as young technical professionals and officers who are engaged in the preparation and development of the second BUR were also part of the training.

The primary objective of the training was to provide knowledge and first-hand experiences to build capacities on mitigation actions (MAs) reporting for selected national staff and specialists to report on MAs in their respective sector for the development of the second BUR of Viet Nam following the UNFCCC guidelines for the preparation of BURs[1]. In addition, the training contributed to elaborating the MRV (Measurement, Reporting and Verification) system institutionalisation and its effect on reporting mitigation actions.

The presentations displayed in the training workshop included an introduction to and overview of activities of the Information Matters project, a definition and overview of MAs and key requirements for their reporting, relevant gaps of Viet Nam´s MA reporting identified during the International Consultation and Analysis (ICA) of their first BUR and available templates that can be used for MA reporting. The various items required to be reported in BURs were elaborated in detail, also by showing examples from other countries and good practices. The participants were also introduced to various mitigation assessment models available and on how to use them in the BUR development and in future to assist the implementation of Nationally Determined Contributions (NDC) under the Paris Agreement. In addition, the training workshop included a presentation on the institutionalisation of a national MRV system

[1] Annex III of decision 2 CP.17

together with the benefits it provides. Different tools that can be used for an institutionalisation as well as current national challenges were highlighted.

A key methodology employed in this training was to provide enough time to transmit the most essential knowledge on MAs and its reporting requirements and practically apply the knowledge delivered in the presentations through group work exercises where national MAs of four different sectors or sub-sectors were reported using the UNFCCC Consultative Group of Experts (CGE) tabular template. A simulated review of those filled-out MA reporting templates by a Technical Team of Experts (TTE) (a so-called “Mock TTE” exercise) was carried out to review, discuss and provide comments to the completed work of the other groups. Appropriate time was devoted for plenum discussions of the output of each group where participants from different groups and the international trainers provided their comments.

The training also enabled the sharing of Chile’s experience and challenges in MA reporting in their first and second BUR, in addition to the development of their national MRV institutional arrangements. Ms. Jenny Mager Santos, Mitigation Department Coordinator of the Chilean Ministry of Environment, gave these two presentations and led the discussion of Chile’s experience recommendations and their applicability to Viet Nam. The mission was further supported by Mr. Gonçalo Cavalheiro from CAOS and Dr. Ahmad Wafiq from NIRAS as international trainers; and the GIZ Information Matters project’s advisors Mr. Oscar Zarzo, Ms. Verena Schauss and Mr. Kien Tran-Mai. The key lessons learned and the main take-home messages identified were summarised at the end of the workshop.

The key lessons learned during the group exercises included:

a) The necessity of complying to the UNFCCC reporting guidelines;
b) The importance of informing about the source of data and the assumptions used;
c) How to define the key progress indicators for each MA;
d) The importance of providing specific dates or timeframe for steps taken and envisaged to ensure transparency; and
e) The importance of having Quality Control (QC) and Quality Assurance (QA) for the MA chapter of the BUR to check for inconsistency.

The main take-home messages for the participants were:

a) To report on both planned and implemented MAs in the BUR;
b) To report on all MAs to the best of knowledge and improve outputs with the next BUR submissions by experiencing the normal learning curve;
c) To use the first BUR as a starting point and address the comments previously raised by the TTE; and
d) To encourage national experts to enrol in the national roster of experts in order to get the opportunity of becoming a member of the international TTE and accordingly gaining experience that will be useful for the future international reporting commitments for Viet Nam.

1 Introduction

1.1 Background

The GIZ Information Matters project provides capacity-building and technical support to a number of selected partner countries in strengthening their in-country capacities for enhanced climate change reporting under the United Nations Framework Convention on Climate Change (UNFCCC), with special focus on the preparation of BURs and implementation of sustainable systems for measurement, reporting and verification (MRV). During the second project phase (2016-2017), support is provided to the four partner countries Colombia, Egypt, Georgia and Viet Nam, building upon the results, experiences and lessons learned gained in the first phase of the project (2013-2016). Technical support to the project is provided by the consortium formed by NIRAS A/S and IP Institut für Projektplanung GmbH.

IM technical assistance translates into supporting the national governmental institutions in charge of measuring and reporting relevant data on greenhouse gas (GHG) emissions and mitigation actions (MA) to improve their reporting systems, especially in the elaboration of national reports to the UNFCCC. The further aim of this initiative is to enhance transparency by improving the workflows of information for BURs.

In the case of Viet Nam, GIZ provides MONRE's DMHCC, as well as other agencies and expert teams related to climate change reporting, with tailored technical support and trainings to enhance the elaboration of the country's second BUR. In this context, GIZ officers and experts from the NIRAS team carried out the first capacity building mission between 24 and 26 August 2016. A roadmap for the implementation of the IM project in Viet Nam was developed and discussed with MONRE's DMHCC after the first capacity building mission. It was accordingly agreed upon to have the second capacity building mission on mitigation action reporting for the BUR. Accordingly, GIZ IM officers and experts from the NIRAS team in cooperation with DMHCC and the GIZ NAMA project (Creation of an Overarching Framework for NAMAs and MRV in Viet Nam) carried out the second capacity building mission 7 and 8 March 2017.

1.2 The BMUB International Climate Initiative

Since 2008, the International Climate Initiative (IKI) of the Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety (BMU) has been financing climate and biodiversity projects in developing and newly industrialising countries, as well as in countries in transition. Based on a decision taken by the German parliament (Bundestag), a sum of at least 120 million euros is available for use by the initiative annually. For the first few years the IKI was financed through the auctioning of emission allowances, but it is now funded from the budget of the BMU. The IKI is a key element of Germany's climate financing and the funding commitments in the framework of the Convention on Biological Diversity.

The Initiative places clear emphasis on climate change mitigation, adaption to the impacts of climate change and the protection of biological diversity. These efforts provide various co-benefits, particularly the improvement of living conditions in partner countries.

The IKI focuses on four areas: mitigating greenhouse gas emissions, adapting to the impacts of climate change, conserving natural carbon sinks with a focus on reducing emissions from deforestation and forest degradation (REDD+), as well as conserving biological diversity.

New projects are primarily selected through a two-stage procedure that takes place once a year. Priority is given to activities that support creating an international climate protection architecture, to transparency and to innovative and transferable solutions that have an impact beyond the individual project. The IKI cooperates closely with partner countries and supports consensus building for a comprehensive international climate agreement and the implementation of the Convention on Biological Diversity. Moreover, it is the goal of the IKI to create as many synergies as possible between climate protection and biodiversity conservation.

1.3 Overview of the IM project

Under the IM project, specific needs and priorities for MRV systems were identified in consultation with the partner countries, which are then addressed through tailored in-country capacity building workshops and trainings, as well as studies and backstopping to address any remaining issues to meet international standards and UNFCCC requirements. Based on the project experience, IM also compiles knowledge products to support a wider audience of users in the process of reporting of climate information, especially the preparation of BURs. Prior to the current phase, GIZ provided technical support during the first project phase (2013-2015) to Chile, the Dominican Republic, Ghana and the Philippines.

The capacity building activities aim to enable the partner countries to analyse and define procedures, methodologies and responsibilities to institutionalise their reporting systems and improve technical capacities. In each partner country, the project starts with a stock taking exercise through which strengths and gaps in the national MRV system are assessed. This is followed by a kick-off workshop in which the results of the stock taking are reviewed together with key stakeholders and a roadmap for capacity building is developed. Table 1.1 below summarises the general themes that can be covered in the capacity building activities throughout the project.

Table 1.1 Thematic trainings throughout the project

Main topics covered by IM	
1	Monitoring and reporting of GHG emissions
2	QA/QC and data management
3	Set-up of sustainable MRV systems at the institutional level
4	Mitigation actions and quantification of their impacts
5	Preparation to meet international requirements related to mitigation to the UNFCCC

2 Training Activities

2.1 Training Arrangements

The second training workshop of the IM project in Viet Nam “Training Workshop on Mitigation Actions Reporting for the BUR development” was co-organised and hosted by MONRE’s DMHCC. The participants invited to attend the training included representatives of relevant MONRE agencies DMHCC and Institute of Meteorology, Hydrology and Climate Change (IMHEN), as well as other line ministries involved in the BUR development processes (e.g. Ministry of Agriculture and Rural Development (MARD), Ministry of Industry and Trade (MOIT) Ministry of Transport (MOT) and Ministry of Construction (MOC)). National experts involved in elaboration and development of the current and previous National Communications (NCs) and BURs of Viet Nam as well as young technical professionals and officers who are engaged in the preparation and development of the second BUR were also part of the training.

In total, 41 participants attended the training, including trainers and GIZ staff. The list of participants is provided in Appendix 2. For appropriate understanding, correct communication and effective discussion, high-quality simultaneous interpretation was arranged. Almost all presentations (as applicable) were prepared beforehand and translated into Vietnamese.

2.2 Training Program

2.2.1 Objectives

The overall objective of this training was to increase the knowledge of the participants and build their capacity in the area of MA identification and reporting. In addition, awareness was built of the importance to develop an institutionalised MRV system and its positive effect on reporting. Specifically, the training aimed to provide knowledge, skills and first-hand experiences on MA reporting for selected national staff and specialists so that they can report on MAs in their respective sector within Viet Nam's BUR2.

The concrete objectives of the training were:

- To familiarise the participants with the UNFCCC Guidelines on MA reporting;
- To provide technical knowledge and support the understanding of the participants in identification and reporting requirements for selected MAs in their relevant sectors;
- To close the gaps on MA reporting identified during the technical analysis of Viet Nam's first BUR during the ICA process;
- To provide specific skills and first-hand experiences in MA reporting and help the participants to fill in templates for MA reporting by hands-on exercises and group coaching.

2.2.2 Methodology

The training was designed and moderated to provide enough time to discuss and practically apply the obtained knowledge through group work exercises. More specifically, the training methodology comprised the following items:

- Providing adequate time to apply the knowledge gained throughout the trainers' presentations through hands-on exercises practicing the reporting of their sector-specific MAs;
- Sharing good practices and lessons learned from other countries especially regarding MA reporting and MRV;
- Encouraging active participation, discussions and questions from the participants;
- Providing the participants with a glance regarding the near future commitments and the benefits of having solid institutional arrangements in place;
- A short wrap-up at the end of each day and of the workshop to support retention of the main lessons of the training.

2.2.3 Technical Contents

To achieve the objectives mentioned in section 2.2.1 using the above mentioned methodology, the technical sessions and coached hands-on group exercises were accordingly designed and delivered by the international trainers. The following sub-sections present the main highlights of the technical contents of the conducted presentations and group exercises. The detailed agenda is provided in Appendix 1.

2.3.1 Overview of MAs

The trainers provided an introductory presentation highlighting that understanding the sources of GHG emissions is a crucial step before deciding upon the mitigation actions. It was then elaborated that the main sources of GHG emissions in Viet Nam and worldwide are static/mobile combustion of fossil fuels in addition to agriculture and land use activities. An MA was defined to be "Any action, policy, measure, plan, program or strategy that changes the, otherwise "normal" (business as usual) course of GHG emissions". It was further highlighted that an MA is often associated with sustainable development goals besides GHG emission reduction. Accordingly, it can be framed within each country's development plan. The participants were introduced to the NAMA tool compiled by GIZ supporting the identification of

MA opportunities. An open discussion was then raised with the participants to discuss MA reporting. The points discussed during the discussion were inter alia:

- There is no compulsory table for MA reporting. Countries can decide, if they would like to use the tables offered by the IM project or CGE. It is even possible to elaborate an own table including all UNFCCC requirements for MA reporting.
- Not only NAMAs but every action leading to emissions reductions should be reported in the MA chapter.
- The reporting about each MA should be as detailed as possible. In the very usual case that data is missing, it is best to simply communicate this in the BUR enhancing transparency. The same level of detail should be applied for every sector to improve comparability.
- If reporting a cross-cutting MA, it is recommended to mention all the effects for the different sectors rather than cutting the MA into the different sectors.
- The information provided in the MA chapter should be as detailed and at the same time "easy to read and follow" for the reviewers.

2.3.2 Key requirements for climate change and MA reporting

To familiarize the participants with international reporting requirements, the UNFCCC key reporting requirements for non-Annex I countries were summarised. The contents of NCs and BURs as per relevant UNFCCC guidelines were presented and compared. Thereby, the more demanding requirements of the MA reporting in BURs were highlighted including the necessity of defining for each MA quantitative goals, progress indicators and progress of implementation. The concept of performance indicators as a key tool for tracking the progress of implementation of MAs was elaborated. An example from the MA reporting chapter of Singapore's second BUR was presented as it is the only Asian country which has submitted two BURs so far. Another example was shown from Ghana being one of the phase I countries of the IM project. Finally, the GIZ BUR template which provides guidance and initial templates for MA reporting within the BUR framework was presented to the participants. It was also translated to Vietnamese.

2.3.3 Gaps on MA reporting identified during the ICA of Viet Nam´s first BUR

As one of the key objectives of this training workshop was to close the gaps on MA reporting identified during the technical analysis of Viet Nam's first BUR by the TTE, this session aimed to provide an overview to the participants about the existing gaps to put them into consideration while developing the MA chapter in Viet Nam's second BUR. The session showed the degree of coverage of the MA chapter in the first BUR in addition to the technical comments raised by the TTE. The main gaps identified by the TTE were the absence of some mandatory items as per the BUR guidelines including the quantitative goals and progress indicators for the MAs as well as steps already taken. In addition, methodologies and assumptions used for Business-as-usual (BAU) projections weren't included. The positive points in the MA chapter in the first BUR were presented together with the identified areas of improvement. The concept of the non-intrusive, non-punitive character of the ICA process was also highlighted.

2.3.4 Chile´s experience and challenges on MA reporting in BURs, recommendations and application to Viet Nam

Chile being one of five countries that already submitted two BURs until 2017 shared experience in the field of MA reporting. Ms. Jenny Mager Santos commenced with a quick revisit of the definition of MAs and shared information about the process of MA design in Chile: The process starts on the strategic level (decisions on policies, strategies and legislation), followed by the program level and finally on the action level where programs and projects are implemented. Ms. Mager Santos highlighted the definition of MRV of MAs showing its importance to evaluate the effectiveness and implementation status of a MA, to promote

information dissemination and coordination across different sectors, to identify problems in data management and to improve the MRV design. She shared that the MA design and operation in Chile is based on the WRI policy and action standard and led a discussion on main items for MRV design (e.g. selection criteria, baseline and targets) and operation (e.g. identify impacts and continual improvement). Ms. Mager Santos explained the different rules set by Chile to deal with the MA-related problems. This includes coordination rules that deal with the problems arising in cooperation and coordination between different units within the GHG monitoring and reporting system and general rules which provide recommendations to solve problems when dealing with different information sources. A schematic representation for the GHG monitoring system database in Chile was then presented showing its different levels; namely, information sources, server(s) and a centralized MRV compiler. Finally, Ms. Mager Santos discussed MRV for NDCs being a challenge for the majority of countries. The key messages on this point are that MRV systems need to be flexible to monitor different types of NDCs and that the countries can build on the MRV system elements they already have.

2.3.5 Templates for MA reporting

This session aimed to provide more details and examples for each MA reporting item required as per UNFCCC BUR guidelines. First, it was stressed that the MA reporting scope depends on the audience which it is reported to. For example, if the MA is to be reported to the government, the reporting should be more concerned with the impacts towards sustainable development than estimation of emission reductions. If the MA is to be reported to an international donor, then the reporting should focus more on estimated emission reductions in addition to the finance and support required. Continuing with the definition of MAs provided in the earlier presentations, more detailed examples about the different types of MAs were provided (including regulations and standards, taxes and charges, subsidies and incentives, voluntary agreements, emissions trading program, information instruments and infrastructure programs). The possibility of having interacting MAs[2] was discussed showing that there are two distinct reporting approaches; reporting each separately or reporting and assessing them together as single package. Reporting interacting MAs separately has the advantage of showing the distinct effectiveness of each, while the disadvantage will be the high uncertainty in determining GHG reductions associated with each MA. The concept of key progress indicators was discussed in more detail and examples and its relevance to the MA monitoring plan was highlighted. It was shown that key progress indicators should be defined in advance as they will significantly affect the main monitoring plan items; namely, the monitoring frequency and the responsibilities of the different involved entities. The presentation then turned to estimated emission reduction being a MA reporting requirement explaining the concept of Business-as-usual (BAU) and mitigation scenario. The participants were further introduced to the ex-ante emissions concept which is defined as the expected future emissions resulting from the MA implementation and to the ex-post emissions concept defined as the actual emissions resulting from the MA implementation. Thereafter, MA chapters of BURs from different countries were presented giving the participants the opportunity to identify gaps and provide suggestions on how to close them

2.3.6 Practical group work and hands-on exercises on BUR templates

In the beginning of the training workshop, the participants were asked to define their area of expertise by choosing one of the following sectors: Power, Transport, Waste as well as Agriculture, Forestry and Other Land Use (AFOLU). Accordingly, four working groups were formed. As a first task, the international trainers asked each group to list different relevant Mas in their sector and choose one or two of them to report. A tabular format was used throughout the training workshop with facilitation by the international trainers and staff of the GIZ IM and NAMA projects. Each group then presented their outputs followed by discussions with the

[2] "MAs that produce total effects, when implemented together, that differ from the sum of the individual effects had they been implemented separately." (Source: WRI Policy and Action Standard - An accounting and reporting standard for estimating the greenhouse gas effects of policies and actions, p.40)

international trainers about the available data and the prioritisation methodology used. The international trainers further recommended other MAs to be included based on publicly available online data, e.g. “Vietnam‘s National Energy Efficiency Programme (VNEEP)” 2006 – 2015, the UNEP/GEF project “Phasing out Incandescent Lamps through Lighting Market Transformation in Vietnam”, UNIDO’s “Industrial Energy Efficiency and Technology Programme” and the FAO/EU project “Climate-smart agriculture: A readiness project in Malawi, Vietnam and Zambia”.

The second step of the practical group exercises consisted of filling in one selected MA in the template, check the available information and define the gaps and missing data compared to the UNFCCC BUR guidelines. The groups used the CGE’s MA reporting template which is very similar to the template on MA reporting provided in the BUR template developed by the IM project.

As part of the group work, the international trainers discussed with the groups how to address the gaps and provided recommendations relevant to each case. After filling in the template for reporting the first MA in all the sectors a “mock TTE” where every group presented their filled in MA reporting template was conducted. A group of three participants (one from each of the other sectors) simulated the TTE, checking the completeness of the filled-in template based on the international guideline for TTE review and providing comments and suggestions. The presenting group was then allowed to reply to the TTE and international trainers’ comments.

The group work was finally wrapped-up by the international trainers who presented the main lessons learned and areas of improvement. The following table presents a sample of the gaps identified from the filled in templates and respective suggestions made. Section 3.1 below presents a more detailed and comprehensive overview on the lessons learned in this hands-on exercise about the MA reporting templates.

Table 2.1 Sample of the identified gaps during the practical exercise of filling in the MA templates

Identified Gaps	Suggestions for Improvement
Inconsistency in the value of estimated emission reductions inside the same tabular template.	It is important to undertake QC/QA of the MA chapter to ensure consistency.
Steps taken/envisaged were mentioned, but the corresponding years were not defined.	Clearly specify the year corresponding to each step in the “steps taken/envisaged” slot of the tabular template.
The value of estimated emission reductions for a MA is written in the tabular template, but there is no information about the data and assumptions used for this calculation.	Clearly mention the data, methodology and assumptions used to estimate the GHG emission reductions in the “methodologies and assumptions” slot of the tabular template.
Estimated emission reductions for a MA are indicated in the tabular template, but the corresponding year is not mentioned.	Clearly mention in the tabular template in the “methodologies and assumptions” slot the year corresponding to such data. Clearly mention the year corresponding to such value in the “Estimated emission reductions” slot of the tabular template.
For a renewable electrification program, the emission factor for the national grid is mentioned; however, its source/calculation methodology is not included.	Clearly mention the source of the national grid emission factor value(s) in the “methodologies and assumptions” slot of the tabular template.
In some MAs it was difficult for the “TTE-group” to identify the main features, components and time plan of the MA.	Provide 4-5 sentences describing the main features, components and time plan of the MA in the “description” slot in the tabular template.
For some MAs it was not clear whether it is implemented on country level, city level or in certain regions.	State the level and boundaries of the MA in the “coverage” slot of the tabular template.

In some MAs the progress indicators are not quantified. Accordingly, it will be difficult to verify whether the MA is progressing as assumed.	Use values for each progress indicator and preferably for more than one target year in the "progress indicators" slot in the tabular template.
In the description of one of the MAs, certain legislation (e.g. Decision 1775) is referred to, while it is not clear to the TTE.	In the MA chapter in the BUR, before filling in the tabular templates, it is strongly encouraged to list the mitigation-related legislations per sector including the most relevant information on each.

2.3.7 MA analysis methods

In this session, the key focus laid on the importance of using mitigation assessment models both to estimate parameters essential for MA reporting and to provide GHG projections at country level which is important for the development and implementation of the country's NDCs under the Paris Agreement. The session started by discussing the structure of the mitigation assessment process necessary to define the most promising MAs at country level. This structure depends on having macroeconomic forecast for the country which is associated with sector-specific baseline technology data for the country (which accordingly constitute together the main inputs for the BAU scenario) and also associated with different sector-specific mitigation technologies (which accordingly constitute together the main inputs for the mitigation scenario). These inputs are processed in a MA analysis model which can then provide the most appropriate mitigation technology(ies) from the GHG reduction and/or mitigation cost perspectives. A considerable part was devoted to discussing the broad classification of MA assessment models into economic models (top-down) and engineering models (bottom-up), where their main features and limitations were clarified as shown in the following table. The presentation then focused on energy sector bottom-up models showing the different available tools like MARKAL/TIMES (examples for optimization models), ENPEP-BALANCE (example for equilibrium models) and LEAP (example for accounting models). To show the possibility of using the MA assessment models as a tool to calculate parameters essential for MA reporting, a Vietnamese case study was presented where it was required to estimate the GHG reduction potential of a renewable energy policy. The Long-range Energy Alternatives Planning System (LEAP) software was used to address this case study. The different steps required for building the model were presented and the results were discussed.

Table 2.2 Limitations of the economic and engineering MA analysis models

Limitations of Economic Models	Limitations of Engineering Models
• Always assumes that markets work efficiently. • Ignores the gains that could be tapped by non-price policy changes. • Relies heavily on aggregate data to the extent that they can fail to accurately predict the consumer and producer behaviour. • Sacrifices sectoral and technology detail in return for being able to solve for general equilibrium resource allocations.	• Existence of hidden costs (including consumer resistance to the mitigation technology) is usually ignored. • The cost of implementation measures (e.g. information campaigns) is sometimes not included. • Macro-economic indicators (e.g. employment, price effects, elasticities,…) are not included. • Disaggregation leading to absence of interactions between different sectors.

2.3.8 How to institutionalise the MA reporting at national level

As one of the main challenges for efficient MA reporting is data availability, the final presentation in the training workshop aimed to deliver the concept, the importance and recommendations for the institutionalisation of MA reporting and national MRV processes in general. The concept of institutional arrangements was presented showing the need to frame it according to the different MRV areas. The officially reported institutional MRV setup for both 2010 National GHG inventory and BUR1 development in Viet Nam were presented (as shown

in the following figures 2.1 and 2.2) and an open discussion with the participants about the workability of these systems took place. The idea of setting up a web-based MRV portal was discussed showing the main features and benefits it can provide. The participants were asked to list the data and documents they would like to find or include in such a web-based MRV portal, if it is to be developed for Viet Nam.

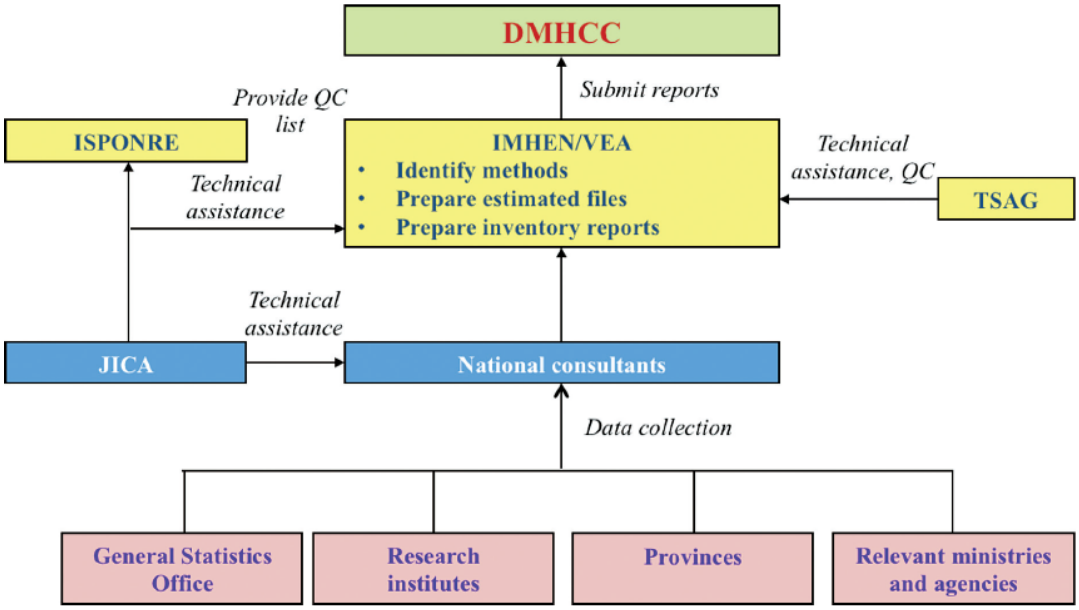

Figure 2.1 Institutional Setup for 2010 National GHG Inventory in Viet Nam

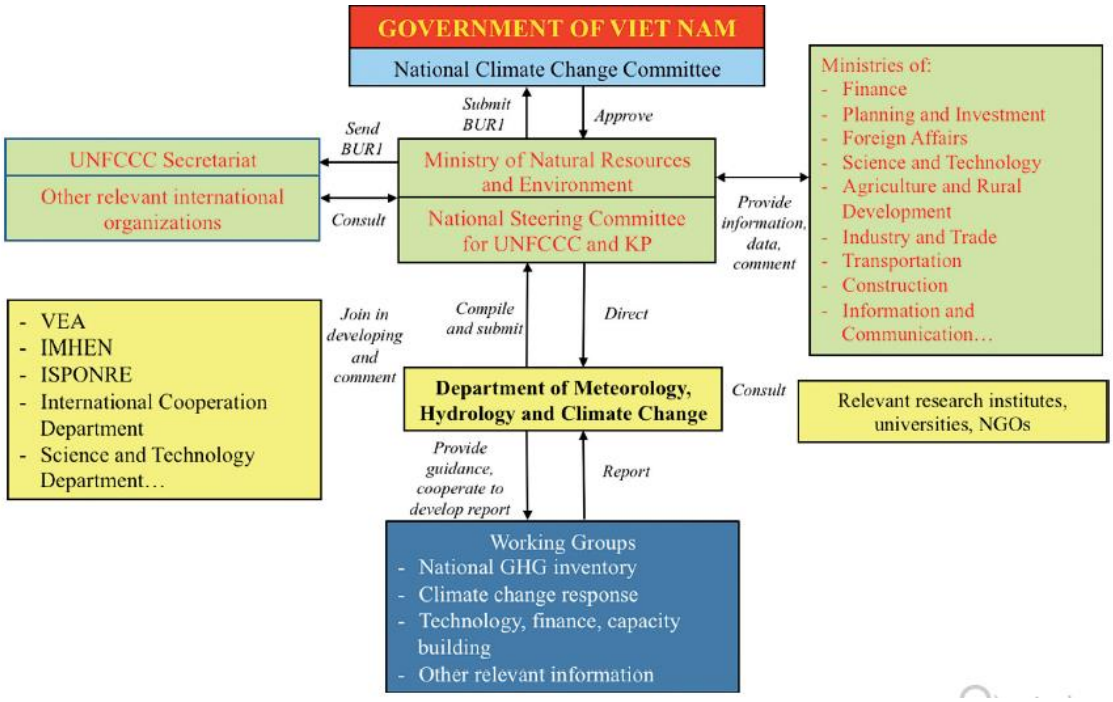

Figure 2.2 Institutional Setup for BUR1 Development in Viet Nam

Ms. Mager Santos added the Chilean experience stressing that it is important to build on nationally gained experiences. Another key message was that the early identification of gaps and capacity building needs will allow the design of the most appropriate MRV system both currently and for future NDC obligations as well. It was also highlighted that working with information centralised systems is an advantage; however the system flexibility must be always taken into account.

3 Lessons Learned and Key Messages

This section summarises the main lessons learned during the training workshop. This includes the lessons learned throughout the group exercises and the discussions after each presentation. The key take-home messages highlighted by the international trainers for the participants are also included.

3.1 Lessons Learned about MA Reporting Templates

Completeness:

- It is very important to include all information required by the UNFCCC BUR guidelines on MA reporting.
- The UNFCCC BUR guidelines mention that developing countries shall provide information on the progress of implementation of the MAs and the underlying steps taken or envisaged. Accordingly, a BUR should include all MAs even those in the planning phase as it is considered a more comprehensive and transparent representation to the country's mitigation efforts.
- It is not necessary to have all the data explicitly to be able to report them. For example, in an official document elaborating a country-scale MA, the KPI may not be defined. In this case, the sectoral expert working on the MA chapter can define the KPI and include it in the tabular template.
- Sometimes there may be a policy that serves as an umbrella integrating various MAs. In this case, it is not necessary to fill in the whole template to report this policy. Filling in part of the table can be sufficient, however it is recommended to provide information about that policy before the tabular templates. For example, a feed-in tariff scheme developed in a country can serve as an umbrella which comprises various MAs like solar energy program, wind energy program and biomass energy program. Those MAs should be completely reported in tabular format as per UNFCCC BUR guidelines. To report the feed-in tariff scheme in the BUR using tabular format, it may be enough to provide a description, quantitative goals, progress indicators and steps taken/envisaged.
- When referring to a political decision, the provided information should be more elaborated. The required details to be reported include a summary for the decision clauses, the quantitative goals, implementation time plan and steps taken/envisaged. Decisions can be elaborated in a section before the reporting tables.
- Baseline assumptions should be clearly mentioned for each MA.
- For the coverage, it is advisable to inform about the impact level of the MA (whether it is applied for a city, group of cities or for the whole country).
- For the item "Steps taken/envisaged", it is necessary to specify the year of each step.
- For the item "Objectives/goals", it is necessary to specify the year of each step.
- For the item "Estimated emission reductions", it is necessary to specify the corresponding year.
- It is important to provide 4-5 sentences describing the main features, components and time plan of the MA.

Transparency:

- Be as transparent as possible: If information is not available, communicate this gap in your BUR and, if possible, suggest or inform about steps taken to close the gap for the next BUR.
- Always refer to the source of data and assumptions that have been used.

Comparability:

- It is very important to include all information required by the UNFCCC BUR guidelines on MA reporting in the tabular template. However, keep in mind that the templates

should not be overpacked with too much text. It should present the main features and necessary background information to the TTE. Using such tabular templates makes it easier for the different countries to learn from each other's reporting experience.

- When informing about the methodology, it is mandatory to show equations used to estimate the GHG emission reductions. There is not much text required.

Consistency:

- It is important to conduct QC/QA of the MA chapter to ensure consistency.

Accuracy:

- The selection of the key progress indicators (KPI) is crucial as they indicate the performance of a MA. Accordingly, for accurate assessment of the MA performance, the MA developer should ensure that the selected KPI are reliable, easily measurable and verifiable.

3.2 Key Take-Home Messages

- Knowledge about the definition of MAs and the missing data to be reported makes it easier to get in contact with the implementing entity and ask about this specific kind of data.
- A MA is any activity that reduces GHG emissions, even if that is not its' main purpose. A MA is usually in line with the country's sustainable development goals.
- Each MA should have an MRV plan to be able to track progress and evaluate effectiveness (both GHG reductions and sustainable development results). It is important to design the MRV plan at the same time as the MA itself as this will be a more effective and accurate way of evaluating the MA.
- This MRV plan should include indicators to facilitate the evaluation of the MA effectiveness.
- The BUR should include all MAs even those in the planning phase. This is important as it is considered a more comprehensive and transparent representation to the country's mitigation efforts.
- The BUR guidelines by the UNFCCC related to MA reporting are not very detailed and there is no mandatory format. This allows the use of publicly available templates for MA reporting (e.g. CGE, IM BUR Template) or even the creation of an own template. Examples and lessons learned from other countries can serve as helpful points of reference.
- Be ambitious, but remember that the first BURs doesn't need to be perfect. The BUR and also the chapter on reporting MAs will improve with the next submissions by experiencing the normal learning curve.
- Consider the previous BUR as a starting point and address the comments raised by the TTE during the TA.
- Consider the ICA process as an opportunity to learn and to improve.
- Consider taking the BUR online training to be enrolled in the national roster of experts and get the opportunity to be a technical expert for analysis of BURs. The experience gained will be useful for the future international reporting commitments of Viet Nam.

4 Appendices

4.1 Appendix 1: Training Agenda

Training Workshop on Reporting Mitigation Actions

Arrival of IM Team, NAMA Team, the Trainers and all participants at the Venue: Monday afternoon, 06 March 2017

Day 1: Tuesday, 07 March 2017		**Speaker/moderator**
8:00 - 8:30	**Registration**	DMHCC and GIZ
8:30 - 9.00	**Opening of the Workshop:** - Opening remark by DMHCC Leader - Opening remark by IMHEN Leader and/or GIZ Viet Nam representative	Mr. Nguyen Khac Hieu (DMHCC), Mr. Van Thang (IMHEN) and Ms. Anna Pia Schreyoegg (GIZ Viet Nam)
9.00 - 9:15	**The Workshop's objectives, working principles and rules:** - Self-introduction by participants and trainers - Workshop objectives and agenda - Working principles and rules for interactive session (roles, outcomes, timing control)	Gonçalo Cavalheiro
9:15 - 9:30	**Presentation about the GIZ Information Matters project**	Verena Schauss IM Project Germany
9:30 - 11:00	**Session 1: Overview of the mitigation actions (MAs) and key requirements for MA reporting** **What are Mitigation Actions?** - Definition(s), types and characteristics of mitigation actions - Items to be included in reporting mitigation actions **Methods to identify mitigation actions +** - Mitigation assessment - Presentation of available tools **Key requirements for climate change (CC) and MA reporting** - Brief introduction to CC reporting - Collecting information on mitigation actions - Key UNFCCC requirements for MA reporting **Short Q&A**	Gonçalo Cavalheiro Oscar Zarzo
11:00 - 11:15	Coffee break	

11:15 - 11:35	**Session 2: Gaps on MA reporting identified during the ICA of Viet Nam´s BUR 1** - Experience on MA reporting during the development of Viet Nam's BUR 1, gaps and needs identified - Challenges and lessons learned	Dr. Ahmad Wafiq
11:35 - 12:00	**Session 3: Chile´s experience and challenges on MA reporting in BURs, recommendations and application to Viet Nam** - Challenges and lessons-learned - Recommendations and applicability to Viet Nam **Short Q&A**	Ms. Jenny Mager Santos
12:00 - 13:30	Lunch	
13.30 - 14:30	**Session 4: Templates for MA reporting** - Objectives of MRV Approach - Types of indicators - Monitoring Plan Items - CGE BUR Template to report MAs - IM Project's BUR Template Best practices: Ghana/ Chile/ Egypt/ Singapore - Lessons learnt from other countries **Short Q&A**	Dr. Ahmad Wafiq
14:30 - 15:15	**Group exercise: Facilitated work on BUR Template** - Participants will be divided into two groups according to their respective sectors (tentatively Energy and Non-Energy) - Each sector will fill in information of relevant mitigation actions into the BUR template with support and coaching by the international experts	Facilitated and supported by Jenny Mager Santos, Dr. Ahmad Wafiq and Gonçalo Cavalheiro
15:15 - 15:35	Coffee break	
15:35 - 16:45	**Group exercise: Facilitated work on BUR Template (continue)**	Facilitated and supported by Jenny Mager Santos, Dr. Ahmad Wafiq and Gonçalo Cavalheiro
16:45 - 17:00	**Summary and wrap-up for the day**	Gonçalo Cavalheiro
18:30	Dinner	

Day 2: Wednesday, 08 March 2017		
9.00 - 10.15	**Group exercise: Facilitated work on BUR Template (continue)**	Facilitated and supported by Jenny Mager Santos, Dr. Ahmad Wafiq and Gonçalo Cavalheiro
10.15 - 11.30	**Mock TTE: Presentation of group work and exercise on cross-review of filled-up reporting templates**	Facilitated and supported by Jenny Mager Santos, Dr. Ahmad Wafiq and Gonçalo Cavalheiro
11.30 - 13.15	Lunch	
13.15 - 13.45	**Recap of the main lessons learned in the MA reporting exercises**	Dr. Ahmad Wafiq
13:45 - 14.30	**Session 5: Mitigation Actions Analysis Methods** - Methods and tools for assessment/analysis of mitigation actions - Top-down vs. Bottom-Up approach - Example using LEAP Software **Q & A**	Dr. Ahmad Wafiq
14.30 - 14.45	Coffee Break	
14.45 - 15:00	***Energiser to re-activate the participants***	Gonçalo Cavalheiro
15:00 - 16:00	**Session 6: How to institutionalise the MA reporting at national level** - The importance of institutionalisation of MA reporting - Moving from project-based to process-based approach - Data flow and procedures - Some experiences from other countries (Chile) **Brainstorming**	Gonçalo Cavalheiro and Jenny Mager Santos
16.00 - 16:30	**Summary and wrap-up** **Workshop Feedback**	Gonçalo Cavalheiro DMHCC
17:00	Travel back to Ha Noi	

4.2 Appendix 3: Workshop picture