資料 3　現地収集資料

(3) Recommendations for Institutionalizing the GHG Inventory Processes

DENR-EMB 提供

Institutionalizing the Philippine Greenhouse Gas (GHG) Inventory Process

## V. Recommendations for institutionalizing the GHG inventory process

Keeping in mind the lessons learned from institutionalization in other contexts and the experience of agencies involved in the inventory process, the Philippines could formulate strategies for systematizing and regularizing the compilation of the national GHG emissions inventory. Such strategies are best employed when they actually build on existing structures and procedures. Annex II contains recommendations for a possible framework to guide information management practices per inventory sector.

In order to institutionalize the inventory process, four central strategies can be employed: (a) informing strategically positioned people about the concerns of climate change and training people in the inventory process, (b) strengthening the IACCC as an institution, (c) establishing within the IACCC a technical working group on the GHG inventory, and (d) developing an information system to prepare the inventory.

### A. Awareness building and technical training

As seen in the cases of Colombia's inventory process and the institutionalization of PCSD and solid waste management, building awareness about the issue is the first step in any type of multi-stakeholder activity. As discussed above in Part III (Constraints on Institutionalization), the complex nature of climate change prevents many people from understanding it, leading to indifference toward or ignorance about the inventory process.

To encourage cooperation with the inventory process, a basic understanding of climate change issues must be achieved at both the technical and managerial levels of the agencies involved in the process. Having high profile advocates of climate change issues, specifically at the levels of decision-making, will help draw institutional support for the inventory. Within government, executive and legislative decision-makers should be briefed regularly on the ever-evolving issues of climate change. These briefings should be designed in such a way as to facilitate the formulation of mandates needed to act on various climate change concerns, one of which is the inventory process. Technical staff should as well be informed since it is they who shall be involved in inventory compilation. A much wider audience for raising climate change awareness is most possible and imperative in the private sector and civil society.

At the same time that awareness is being built, technical capacity should also be developed among those who are involved in the inventory process and those who are in a position to train others within their organizations. Such a multiplier strategy of training trainors ensures that the skills and resources needed in the inventory process are not lodged solely in one government office or consultancy firm. It also ensures that the inventory process is not easily thwarted by the periodic changes in administration. Continuity in training ought to be assured since guidelines for inventory compilation (such as the Revised Guidelines and Good Practice Guidance of the Intergovernmental Panel on Climate Change) are continuously evolving with the development of GHG emissions research.

## B. Institutional strengthening of the IACCC

To realize the goal of implementing a system for the national GHG inventory, the IACCC needs to assert its existing authority and broaden its political boundaries. The attention demanded of the IACCC by the inventory process may be comparable to its other current commitments. Specific details of the inventory system will be laid out later in this section.[14] Before these steps can be fully pursued, however, the IACCC must establish three prerequisite conditions:

***A full-time secretariat*** Since the ultimate goal of institutionalizing the GHG inventory is to produce an annual account of GHG emissions, the responsibilities of the Secretariat as the coordinating body for this exercise will be ongoing. As soon as one inventory is completed, the assembly of data for the next one should begin. Members of the Secretariat are already restricted in the time that they can dedicate to the IACCC's existing activities because of their duties in the DENR's Environmental Education and Information Division. Adding more responsibilities to their daily workload will only exacerbate the situation and threaten the sustainability of the inventory process. Allowing the members of the IACCC Secretariat to focus on their functions as administrators o climate change activities would enable them to provide the administrative support tha this endeavor will require and to advance the goals of the IACCC.

In examining the lessons learned at the PCSD, one former NEDA secretary expresse that the creation of a full-time secretariat for the PCSD would ensure the stability of th PCSD.[15] In order to prevent interruptions in IACCC activities like the ones that PCSI experienced when members of its secretariat needed to focus on their other functions a NEDA staff, a full-time secretariat could be established for the IACCC.

***Continuous financial support*** As with all activities, the inventory process will requi financial resources. Prior to any long-term investments like research into emissio factors or an extensive QA/QC process, the inventory process will require funding f organizational meetings, staff development, outreach activities and the like. A permane IACCC secretariat would also require a budget for staff salaries and expenses. In order fully reap the benefits of tracking national GHG emissions, the process must continuous. Without sufficient funding to maintain the process, it risks becoming an hoc exercise that is activated only by external funding.

***Ability to enforce compliance*** Some stakeholders already view the annual reporti guidelines as a threat or an added burden, discouraging them from providing t necessary information on a voluntary basis. As mentioned earlier, IACCC's existi mandate does not provide it with the tools necessary to require actors to submit

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appropriate information or even to attend meetings. To ensure the continuity of the inventory process, the IACCC needs the authority to demand compliance.

*Mandate*

One way to secure all three of these prerequisites for an institutionalized inventory system is by strengthening the IACCC's mandate. The IACCC's current mandate permits it to establish the working groups that will serve as the instruments of the inventory process. Once established, however, the working group would be incapable of even devising mechanisms for the inventory system without the administrative support of a secretariat and accompanying funds. If it overcame the odds and outlined a set of procedures, it would need enduring authority to complete its tasks. Since the current mandate does not provide for any of those elements, IACCC must use other means to secure them.

Initially, the IACCC may seek support for a full-time secretariat and additional funding from the DENR secretary. Part of the rationale behind awareness-raising activities among leaders in government is to build support for such a move. Due to the instability of programs designed at the behest of a standing secretary and the restriction of his authority to activities within DENR, however, this can only be seen as an interim solution. Securing a more permanent arrangement is critical.

A revised administrative order was drafted in 1998 with provisions to strengthen the IACCC, but it was never approved. The structure and content of this document ought to be revisited and reviewed in order to determine how its terms might provide a stable environment for the inventory process. After revision, it will be necessary to lobby the President and other appropriate leaders to ensure its enactment. Targeting Presidential advisors during the awareness-building campaigns might make securing the passage of such a mandate substantially easier.

Finally, a set of implementing rules and regulations (IRR) should be drafted for the revised directive. Without these, the real powers of the Committee are unclear.

Pursuing short-term measures has proven to be a successful strategy in winning long-term viability and should be pursued. The National Statistical Coordination Board (NSCB) "piloted the Philippine Economic-Environmental and Natural Resources Accounting Project (PEENRA) in 1995 to 1997 only as a subprogramme of the Integrated Environmental Management for Sustainable Development (IEMSD) of the DENR with funding support from the United Nations Development Programme (UNDP)".[16] Different technical working groups were then created for the compilation of Fishery, Land/Soil and Water Resources asset accounts. In the phase II of the project, the NSCB aims to institutionalize the project by creating a PEENRA Unit in NSCB. The PEENRA, however, has remained a foreign-assisted project up to year 2001 due to the existing government policy of "no creation of new units". After determined advocacy work of

[16] http://www.nscb.gov.ph/projects/peenra.htm

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NSCB to the Department of Budget and Management, PEENRA has been considered as a locally funded project in the year 2002, a stepping-stone towards the regularization of the PEENRA Unit at the NSCB.[17] After establishing the importance of the GHG inventory process—if even on a limited basis—it should be easier to rally support among appropriate leaders to provide adequate funding and personnel.

In reality, strengthening the mandate of the IACCC at the level of a republic act or an executive order is probably a medium-term goal because of the substantial level of support that it demands. As the case of solid waste management demonstrates, however, a focused mandate is a vital component of a successful inventory process.

## C. Technical Working Group on GHG Inventory

As the IACCC generates support for a stronger mandate, it can begin the process of institutionalization by creating a technical working group designated to complete the inventory on a regular basis. With accountability resting on the shoulders of this body, completion of the inventory in an efficient and timely basis is more certain than in its absence. Forming the technical working group (TWG) and outlining the mechanisms of the inventory process can commence at a basic level even before the establishment of a full-time secretariat or an institutional fund because the IACCC's current mandate grants it the power to establish TWGs. Although the full institutionalization of the TWG will depend upon the procurement of additional resources, laying the groundwork for the inventory process can begin immediately.

### 1. Structure

Each of the five sectors identified in the greenhouse gas emissions inventory—energy, industry, agriculture, waste and land use change and forestry—will maintain its own sectoral working group (SWG) responsible for conducting and reporting emissions for the respective sector. It is strongly recommended that membership within each sector include organizations that possess data relevant to the inventory as well as a research institution that can serve as a resource for emissions research or as a partner in the QA/QC process. A lead agency can be designated to serve as the coordinator of each sectoral inventory based on its ties with the other actors in the sector and its own statistical and informational resources.

An overall central steering committee composed of organizations with experience in conducting inventories and representatives from the lead agencies of each of the five SWGs will be called the GHG Technical Working Group (GHG-TWG). The GHG-TWG itself shall oversee all technical aspects of the inventory process, focus on cross-cutting issues, act as the final mediator in any dispute among members of the SWGs, and will be responsible for synthesizing the sectoral inventory results from the SWGs into the final

[17] based on emailed comments of NSCB (Mr. Edgar Lopez-Dee) on draft of this document

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national inventory. Actual membership in the SWGs can be based on institutional mandate and capacity. One possible configuration is shown in Figure 1.

By providing administrative support for the technical functions of the members, the IACCC Secretariat will act as the driving force behind the completion of the periodic inventory. One or more members of the IACCC Secretariat should be designated to perform secretariat functions to the TWG and the SWGs. In addition to organizing meetings and trainings as needed, the secretariat will maintain an updated contact list of representatives from each participating organization to ensure the continuity of the inventory. When all worksheets have been completed and the final inventory compiled, the secretariat will be responsible for coordinating the presentation of these documents to the entire IACCC for final approval before submitting them to the UNFCCC.

## 2. Tasks

Some of the more immediate tasks for the GHG-TWG are described below. Annex II details the GHG-TWG's specific functions and a suggested scheme of information flow that is to guide inventory compilation from emission source to the GHG-TWG.

***Creating and strengthening partnerships*** Just as Brazil pursued unconventional partners, the IACCC can seek out actors who have not traditionally played a significant role in climate change activities yet can lend technical expertise to the inventory process. Academics whose research has potential application in the determination of local emissions factors and activity data, or other partners with access to data needed for the inventory could be tapped in order to complete the inventory's final output.

The GHG-TWG could serve as the venue to formalize these new ties and to solidify pre-existing relationships, allowing contributing organizations to discuss difficulties or conflicts that arise. With improved communication among stakeholders, agencies with statistics relevant to the inventory can learn about each other's data collection and management practices. Through this sharing, questions about the reliability of some information can be clarified, leading to a better understanding of the inventory's accuracy. Additionally, information management techniques may be streamlined over time as government agencies become more aware of overlapping data collection requirements, thus improving relations with the private sector.

***Technical capacity building*** One component of the process of forging partnerships among groups involved in climate change can involve strengthening the member agencies themselves. Unfortunately, the IACCC alone cannot develop all of the data collection systems or infrastructure necessary for the inventory process to run smoothly; it must work within the environment established by its partners. The GHG-TWG's success in pursuing technical capacity building activities for its partners, however, will be a major factor in determining the performance of the inventory process.

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***Developing a reporting framework*** Once the membership of the GHG-TWG and the SWGs are established, its members must devise a reporting framework. Since the IPCC has already laid out the methodology and content of the inventory reports, the GHG-TWG would only need to clarify the administrative aspects of their preparation and then supervise the technical aspects of their completion. In order to establish a continuous system for completing the inventory, the GHG-TWG would need to specify four components of the reporting process:

- a timetable for agencies to submit data,
- the flow of information from the source agencies to the central team, [18]
- the level of data analysis to be conducted at each reporting level, and
- a strategy for ensuring compliance with the established requirements.

This last component is probably the most crucial factor in determining the success of the inventory process. Even after securing the legal authority to require compliance, the GHG-TWG must continue to strategize on the efficient flow of information that an inventory system demands. Catalysts might include both negative and positive inducements, ranging from sanctions for non-compliance to incentives for on-time and accurate reporting.

***Ensuring quality assessment and quality control*** Although the development of a comprehensive quality assessment and control procedure will take a long time, it is important to introduce elements of such a system early. According to the IPCC Good Practice Guidance, maintaining a program of QA/QC helps "to improve transparency, consistency, comparability, completeness, and confidence in national inventories."[19] Especially since few systems currently exist to verify the statistics provided by government agencies and private sector firms, the development of a QA/QC system can help evaluate data reliability, which will be important for baseline and trendline purposes.

The levels at which QA/QC procedures will be applied need to be considered as well. Such levels may be the stage of activity data collection, worksheets completion, or overall inventory compilation, etc.. The identity of potential evaluators or reviewers, institutional support, and sources of funding ought to be factored in when institutionalizing QA/QC in the inventory process. The availability of financial and technical resources will affect the scope of the QA/QC process.

## D. GHG information management system

Considering the sheer volume of data required to complete the inventory, a process without an organized data management system is doomed to fail. In the system currently employed to source the data and complete the inventory worksheets, too many people are

[18] Please see Annex II for one possible structure for the flow of data from source agency to central compiling team.

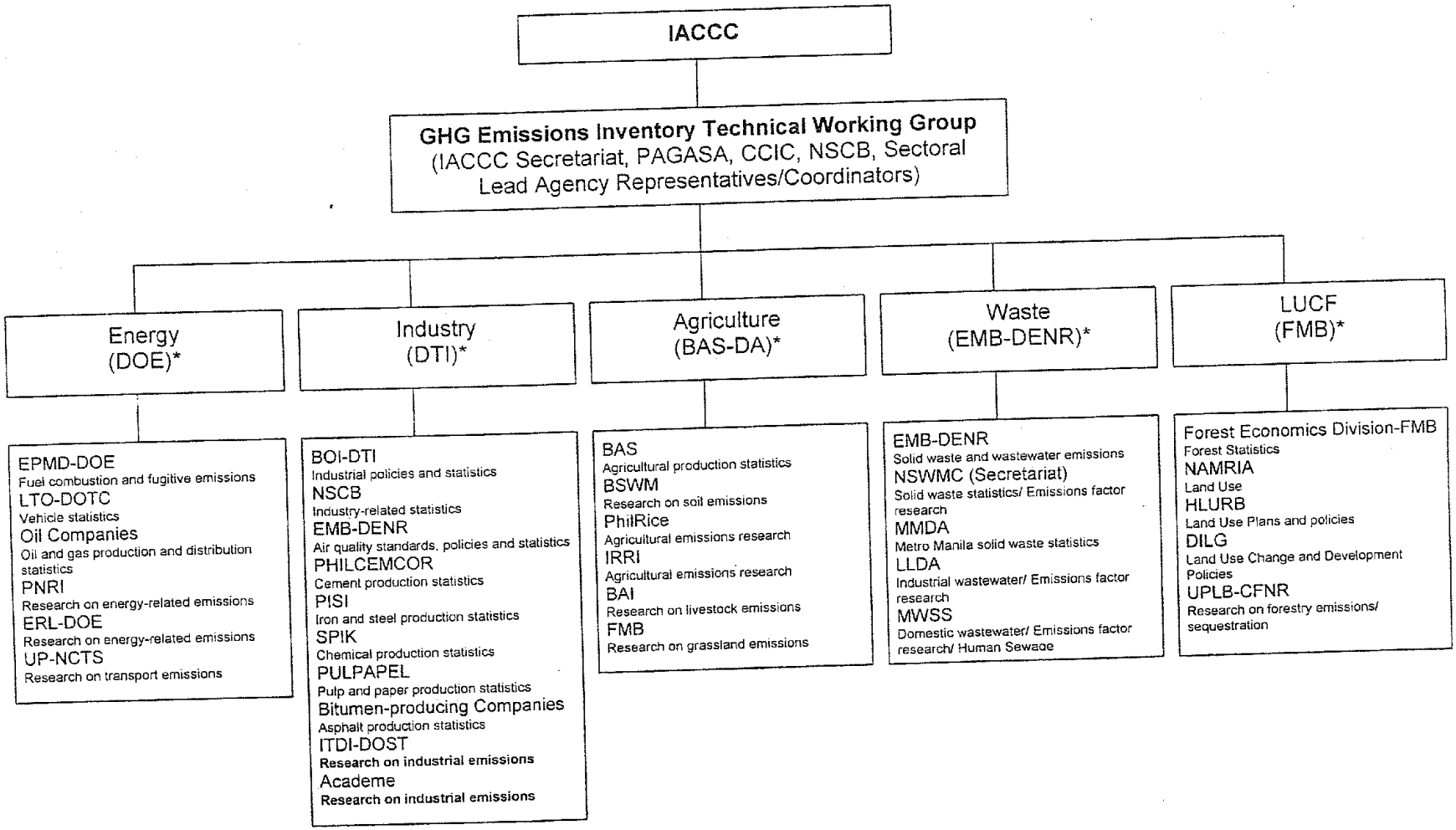
[19] Intergovernmental Panel on Climate Change. *Good Practice Guidance and Uncertainty Management in National Greenhouse Gas Inventories.* May 2000, p. 8.4.

needed to sift through files and convert measurements from one reporting format to another. In order to maintain a continuous reporting schedule, more efficient methods must be developed for compiling the statistics necessary to complete the reports.

To facilitate data submission by the reporting agencies and to minimize paperwork among agencies, a computer/internet-based system for reporting GHG emissions should be established. Such a system would simply build on the manual information management systems established by the GHG-TWG, allowing agencies to input their data from a remote location via the internet and incorporate a procedure for QA/QC. Implementing this type of database would eliminate the need for so many 'middle men' in the inventory process, as the Australian Greenhouse Office has discovered, saving time and money. It would also minimize the time required to compute the emissions from the activity data by enabling a user to input the activity data directly into the database, with the conversion factors already programmed into the system.

Freed from the need to evaluate worksheets for human error and to discuss minute details of translating data into actual emissions, members of the GHG-TWG and SWGs would have more time to focus on cross-cutting issues, local emissions research, managing uncertainties, and designing a more complete QA/QC process. A web-based version of this system may take time to develop because some government agencies lack access to the internet, but the adoption of a computerized database for the inventory is essential to ensure efficient management of the data received and to allow for improved archival of data. If adopted, however, it could serve as a prototype which other Parties to the UNFCCC could use to develop their own inventory systems.

## Figure 1. Proposed GHG Emissions Inventory Working Group

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資料 3　現地収集資料

(4) Clean Development Mechanism

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# Clean Development Mechanism


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**Introduction to the CDM**
summarizes the national values and benefits of participation in the CDM, including an outline of the process by which the CDM projects can be identified, developed, financed, implemented and the resulting CDM project emission reduction monitored, reported, verified and certified.

This introduction is connected to a larger UNEP project on "Capacity Building for the CDM" implemented by the UNEP Collaborating Centre on Energy and Environment, Risoe National Laboratory, Denmark. The overall objective of the project is to develop the institutional capability and human capacity for implementation of the CDM in developing countries.

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# Clean Development Mechanism

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