

Information Matters, Dominican Republic:

Information Matters: Capacity Building for Ambitious Reporting and Facilitation of International Mutual Learning through Peer-to-Peer Exchange



4th Training Mission: Dominican Republic

Santo Domingo, 10-12 March 2015

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Mission activities

From 10 to 12 March 2015, a capacity building workshop on greenhouse gas (GHG) inventories and the preparation of the biennial update report (BUR) was conducted in Santo Domingo (Dominican Republic) within the framework of the Information Matters project.

The training on GHG inventories was conducted during the first 2.5 days of the workshop. It comprised a presentation by the sectoral inventory leaders on the progress since the last workshop in November 2014 and the current status of the inventory. It was followed by an in-depth discussion of methodologies and data sources for the Energy, Industrial Processes and Product Use (IPPU), Waste and the Agriculture, Forestry and Other Land Uses (AFOLU) sectors (four working groups). The results of the group work were presented towards the end of the workshop including the discussion of cross-cutting issues, conclusions and the outlook on the next steps.

The training on the preparation of the BUR was conducted in the afternoon of day 3 and focused on the requirements of the BUR, support materials available and experiences from other countries. Next steps with regard to the preparation of the BUR in the Dominican Republic were discussed.

Key discussions and results of the workshop are presented in the following sections. These comprise a discussion of sectoral GHG inventories (including quality management) as well as discussions concerning the preparation of the BUR in the Dominican Republic. Finally, overall conclusions are drawn and next steps suggested.

Sectoral GHG inventories

In the following sections, the discussion and results of the four working groups regarding sectoral GHG inventories are presented. The status of work is assessed by the two consultants involved in the workshops¹ against the five quality principles established by the Intergovernmental Panel on Climate Change (IPCC), namely transparency, accuracy, completeness, consistency and comparability (TACCC)². Based on the status of work, recommendations for the further development of the sectoral inventories are made by the two consultants. However, it has to be noted that some recommendations are relevant only for the longer-term development of the Dominican GHG inventory while others should be implemented in the short term. Recommendations are prioritized accordingly.

Energy

During the presentation of the current status of the GHG inventory in the energy sector, it was explained that both the sectoral and the reference approaches were being further developed within the team and that a time series was being created for several years. Both approaches were being further refined in order to be able to discuss differences between them. Calculations were carried out both in Excel and the IPCC inventory software. The aim was to finalize calculations during the month of March 2015.

The aim during the training was to prepare, to the extent possible, an (almost) complete inventory according to the reference and the sectoral approaches. The presentation in the last session of the workshop showed that differences between both approaches are not excessive (20.4 million t CO₂ according to the reference approach and 21.5 million t CO₂ according to the sectoral approach). Differences are significantly smaller in comparison to the last workshop in November 2014, which constitutes an improvement. Also, the working group explained that national and international aviation could be separated quite well according to the different fuel types used for national and international air transport. This can also be considered as an improvement since the workshop in November 2014 where a more general assumption was made.

Overall, in the energy inventory, there are no major issues with regard to transparency due to the fact that the calculations are generally based on the energy balance and IPCC default emission factors. The approach used for discriminating national and international aviation requires special documentation, though. Overall, it is recommended to document transparently all methodologies and data sources used both in the worksheets and the inventory report.

The energy inventory is generally complete as regards GHG emissions from fuel combustion since all fuel uses from the energy balance are covered. It is recommended to estimate fugitive emissions to further improve the completeness of the inventory.

The energy inventory is generally consistent since the tier 1 method using IPCC default emission factors is used for the whole time series and all sub-categories of the energy sector.

The energy inventory is generally comparable since it is based on the structure and the methodologies provided by IPCC.

¹ Ralph O. Harthan from Germany and Paulo Cornejo Guajardo from Chile.

² For more information on the TACCC principles see the IPCC 2006 Guidelines, Volume 1: General Guidance and Reporting, Section 1.4.

Accuracy is currently limited due to the use of tier 1 methodologies and default emission factors. Especially, for key categories higher tier methodologies are recommended. However, this is not a short-term priority and should therefore not be considered for the immediate next steps.

IPPU

In the IPPU working group, the main industrial processes in the Dominican Republic were discussed, which comprise cement production, lime production, ceramics production, production of ferronickel and the use of solvents and other uses (such as for medical purposes). During the training, GHG emissions from cement and lime production as well as from ferronickel production were estimated. According to these calculations, in 2013, GHG emissions from lime and cement production amounted to 1.6 million t CO₂.

The inventory of the IPPU sector requires attention with regard to transparency, especially in the following areas:

- Data collection including different data sources between inventory years and the consistency between these data sources
- Documentation of the emission factor regarding ferronickel production
- Justification and documentation of categories reported as not occurring or not estimated

Overall, it is recommended to document transparently all methodologies and data sources used both in the worksheets and the inventory report.

The inventory of the IPPU sector is generally complete due to the non-existence of many industries referred to in the IPCC guidelines. It is recommended to estimate GHG emissions from ceramics production in order to further improve the completeness of the inventory. Also, it is recommended to verify the non-existence of other categories, among which are the following potential sources: non-energy and solvent use, refrigerants etc. (F-gases), other products and uses, other. However, the latter is not a short-term priority. Also, reporting on F-gases is only encouraged according to the Guidelines for the preparation of national communications for non-Annex I Parties. Focus should first be laid on known major categories.

The inventory in the IPPU sector is generally consistent since the same methodology is used through-out the time series. It is recommended to check time series consistency of the activity data for clinker production. It is generally noted that acquisition of consistent data over the time series constitutes a challenge in the IPPU sector. It is therefore recommended to clarify institutional arrangements for the provision of such data on an ongoing basis.

The inventory in the IPPU sector is generally comparable since it is based on the structure and the methodologies provided by IPCC.

Accuracy is currently limited due to the use of default emission factors. Especially, for key categories higher tier methodologies are recommended. The accuracy of the emission factor for ferronickel production is not yet established since it was developed for the circumstances of production in the Netherlands. It is recommended to check the suitability of the emission factor for the Dominican case. However, improving the accuracy is not a short-term priority and should therefore not be considered for the next immediate steps.

Waste

In the waste sector, a major challenge was the data handling in the IPCC software as well as the IPCC Waste Model in Microsoft Excel. The inventory team also identified some abrupt data changes between

individual years³. Data on methane capture (available due to a CDM project) needs to be collected. It was also mentioned that no data is available for waste water treatment.

During the training, representatives of different institutions were present. Potential data sources were discussed. It was found that data is available, the use of which is difficult due to several inconsistencies between the sources. Further calculations were carried out in the IPCC inventory software and the IPCC Waste Model. The generation of per capita waste production was discussed during the training. Overall, many default values were used due to the absence of (processed) national data. However, the plausibility of the default values for the Dominican case is questionable. GHG emissions from landfills estimated during the workshop were found to be extremely high which indicates that there may be an error in the estimation. Also differences to the results in the second national communication were significant.

The waste sector is a rather complex sector due to its heterogeneous categories and sub-categories, the necessity of data for many years (for landfills) and the multitude of different actors and data sources (at local and/or national level, from companies, etc.).

The waste sector requires special attention with regard to transparency. Especially, data collecting and processing needs to be transparently documented due to the many different data sources and the lack of consistency with regard to spatial and temporal coverage of the data. Also, institutional arrangements for data collection need to be documented in a transparent manner. Overall, it is recommended to document transparently all methodologies and data sources used both in the worksheets and the inventory report.

The inventory in the waste sector is partially complete since emissions from landfills and waste water treatment are included. It is recommended to verify whether all relevant industries are included in the estimation of emissions from wastewater treatment. It is recommended to liaise with the IPPU working group since it may dispose of information on relevant industries in the Dominican Republic. Since wastewater treatment constitutes an important GHG emission source in many countries, it is recommended to work on this category in parallel to estimating GHG emissions from landfills. Furthermore, it is recommended to estimate emissions from incineration and to check whether there are relevant categories of biological waste handling (such as composting). However, estimating emissions from these categories should not be a short-term priority since corresponding emissions are small in many countries and there is currently no information on significant GHG emissions in these sectors in the Dominican Republic.

The inventory in the waste sector is consistent with regard to the consistent use of the same methodology throughout the time series. However, the data used for the long time series required for the estimation of emissions from landfills includes several inconsistencies due to the many different data sources and varying spatial and temporal coverage of the data. Due to the importance of GHG emissions from landfills, it is recommended to dedicate resources in the short term to the preparation of consistent data for the estimation of emissions from landfills.

The inventory in the waste sector is generally comparable since it is based on the structure and the methodologies provided by IPCC.

Accuracy is currently limited due to the use of default (emission and other) factors which in many cases do not correspond to the Dominican case (e.g. shares of different landfill types for solid waste). It is recommended to use national data to improve accuracy. In this regard, it is recommended to liaise with the different stakeholders in the waste sector (some of which were present in the workshop) for the acquisition of more accurate data. Also, information on acquisition of relevant waste data in other

³ E.g. for per-capita waste generation or population.

developing countries, which is currently assessed as part of a short desk study within the GIZ Information Matters project, to be finalized by May 2015, may serve as an input to this discussion. However, improving accuracy is not a short-term priority, unless a robust calculation of GHG emissions from waste (based on currently available data) is available.

During the workshop it was also noted that GHG emissions from landfills, according to current estimates, appear to be implausibly high. A review of the calculation procedure is recommended.

As further next steps, the team plans to include all data in the IPCC software and to check for consistency of the data. For this purpose, the data needs to be reviewed. For information on municipal and industrial solid waste composition, further investigations are required and cooperation between different institutions is needed. It is also noted that the time series of population also features some inconsistencies due a change in methodology. During the discussion, it was also noted that default values in the waste sector often do not correspond to the actual conditions in the country. In this regard, it may be worthwhile considering the use of the Emission Factor Database (EFDB, <http://www.ipcc-nggip.iges.or.jp/EFDB/main.php>). With regard to wastewater treatment, it was discussed whether further data could be obtained for different industry segments.

AFOLU

In the AFOLU sector, there was a general lack of activity data for the estimation of emissions and removals.

During the training, the Chilean inventory coordinator gave a comprehensive overview on the requirements and methodologies for the estimation of emissions and removals in the AFOLU sector with the purpose of identifying the categories that can be estimated with the available data. The expert commented that several calculations are possible in the agriculture sector, whereas in forestry and other land uses (FOLU) activity data are currently missing or unavailable to the sectoral inventory team. The team in charge of the AFOLU sector for the Third National Communication did not obtain support from the Ministry of the Environment (MoE) regarding data in the forestry sector. Also during the workshop, no experts from the forestry and land-use sector were present. A representative of the Ministry of the Environment was present as observer during the first day of the workshop. Therefore, at present it is not possible to estimate emissions and removals from forestry and other land uses (FOLU) activities. It is recommended to liaise with the Ministry of the Environment regarding support in estimating emissions and removals from the forestry sector.

In the agriculture sector, methane emissions from enteric fermentation and from manure management have been estimated for 2010. N₂O emissions have not been estimated, yet it was found that for agriculture, data is available from most of the important sources (including FAOSTAT data). Still, direct data sources or publications are required to have more reliable estimations. Currently, many expert judgments are used at the national level.

In conclusion and as further steps, calculations in the agriculture sector can be completed in a short time frame. The estimation of emissions and removals in the FOLU sector will require more time and improved cooperation among organizations. This information is likely to be absent from this reporting period of the inventory, but it is highly encouraged to improve cooperation among governmental organizations to improve completeness and accuracy of this category.

Cross-cutting Issues

During the training, the Chilean GHG inventory, including data and methodologies, institutional arrangements and results, was presented and discussed. Also, a presentation was given on the purpose and use of the key-category analysis.

In the discussion about cross-cutting issues concerning the inventory preparation in the Dominican Republic three major findings were found:

- Additional capacity is required in some fields (e.g. in the AFOLU sector)
- Continuity of work must be ensured. For the moment being, work is handled mainly by consultants. However, technical knowledge for the preparation of GHG inventories established so far needs to be complemented by institutional arrangements. Also, the GHG inventory must be more visible among the responsible institutions and at the level of decision-making.
- It would be useful to establish a focal point for GHG inventories that could also be in charge of acquiring funds for ensuring continuity of inventory preparation.

Biennial Update Report

The workshop on the preparation of the BUR was conducted in the afternoon of day 3 and focused on the requirements of the BUR, support materials available and experiences from other countries.

Next steps with regard to the preparation of the BUR in the Dominican Republic were discussed. It was found that with the work conducted for the Third National Communication most of the information for the BUR (including GHG inventory data and data on mitigation actions) would already be available.

It was further discussed whether to have one single document (NC and BUR) or to have two different documents with cross-referencing between them. Overall, it was found that there must be good coordination between the persons responsible for the NC and for the BUR. Overall responsibility of the BUR lies with the CNCCMDL, but a coordinator remains to be nominated, and the role of the Ministry of Environment in the BUR preparation remains to be clarified.

During the discussion, it was also mentioned that information on financial support received is already available (including a registry on international support prepared by the CNCCMDL). Some processing of the information is needed for the BUR. In addition, the amount of support required needs to be specified.

With regard to mitigation actions, it was mentioned that there are other policies and measures besides NAMAs currently in place, for instance, a tax related to CO₂ emissions of vehicles. Other measures include the conversion of vehicles from diesel to natural gas use, the extension of the metro in Santo Domingo or energy efficiency measures. Also, the Climate Compatible Development Plan study prepared by McKinsey (Plan DECC) includes an overview of potential mitigation actions to be potentially addressed over the next years.

With regard to national circumstances to be reported in the BUR, these could be taken from the Second National Communication and updated in coordination with the Third National Communication support project.

Overall conclusions and next steps

GHG Inventory

Energy

Overall, it is recommended to complete the energy sector inventory for the year 2010 including fugitive emissions. A discussion of differences between the sectoral and reference approaches should be carried out (including differences according to fuel types (solid, liquid and gaseous fuels)). Methodologies used, data sources and assumptions as well as results should be transparently documented. It is not recommended to move to higher tier calculation methodologies until the calculation system according to tier 1 is fully established.

IPPU

The next steps comprise the collection of data for the sectors food/beverage, pulp/paper and ceramics. In this regard, it is recommended to check whether in these sectors there are significant non-energy (i.e. IPPU) emissions which need to be estimated. However, focus should first be laid on completeness of known major categories. For the moment being, it is recommended to further complete the inventory and transparently document the methodologies used, data sources and assumptions as well as results before dedicating resources to the collection of more accurate data. Also, institutional arrangements need to be further clarified to ensure the provision of consistent data in the sector on a continuous basis.

Waste

Overall, it is recommended to complete the data needed for the estimation of emissions from landfills (before collecting data from smaller sources, such as incineration or composting) since it appears to be the most significant source in the sector. Also, GHG emissions from wastewater treatment should be estimated. Also, in order to get a first rough estimate, it is recommended to complete and document the waste inventory first based on default values before improving the accuracy of individual parameters. Also, it is recommended to transparently document the methodologies used, data sources and assumptions as well as results. Also, institutional arrangements need to be further clarified and documented to ensure the provision of consistent data in the sector on a continuous basis. Due to the implausibly high emissions obtained during the training, it is recommended to review the calculation procedure.

AFOLU

Regarding the TACCC principles and comments made above, the expert recommends the following:

- Create and maintain capacity within the AFOLU team in order to ensure continuity of staff for future updates of the inventory aimed at improving the accuracy of the inventory.
- Involve experts from both external and internal entities in the inventory process to increase accuracy and transparency of the estimations.
- Improve the cooperation among governmental organizations to estimate emissions and removals from FOLU activities, increasing completeness and accuracy of the inventory. In this regard, it is recommended to liaise with the Ministry of the Environment regarding support in estimating emissions and removals from the forestry sector.

Cross-cutting issues

With regard to cross-cutting issues, it is recommended to improve the capacity in some fields such as regarding the forestry sector. Also, further research is needed with regard to data acquisition in the IPPU and waste sectors.

Generally, it is highly recommended that the Dominican Republic clarify its institutional arrangements with regard to the national GHG inventory. Continuity of work must be ensured. In this regard, the general ownership of the GHG inventory (including visibility among involved institutions) should be clarified including responsible staff and a focal point (among other things responsible for ensuring ongoing finance for inventory activities). When clarifying institutional arrangements, the provision of data required for the inventory also needs to be discussed, especially in the IPPU, AFOLU and waste sectors.

BUR preparation process

Overall, further clarification is needed with regard to the compilation team in charge of the BUR and corresponding deadlines for persons and institutions providing inputs to the BUR. A joint work plan between the BUR and the NC team would be desirable, in which tasks are allocated and deadlines are specified.

Furthermore, it is recommended to introduce a coordinator overseeing all different climate-related tasks (GHG inventory, NC, BUR, NAMAs...) in order to ensure continuity and consistency between the different areas.

Appendices

Appendix 1: Agendas of the mission workshops

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4th Capacity Building Mission

10-12 March 2015, Santo Domingo

Día 1: Ejercicios avanzados en la preparación del inventario nacional de emisiones de GEI

Hora	Contenido	Detalles
09:00	Introducción	Bienvenida, análisis de objetivos, presentación de agenda del taller, presentación de participantes
09:30	Status del Inventario GEI RD	Estado actual del Inventario, últimos avances, brechas existentes y acciones futuras.
10:45	Coffee Break	
11:15	Status del Inventario GEI RD	Estado actual del Inventario, últimos avances, brechas existentes y acciones futuras.
13:00	Almuerzo	
14:00	Conclusiones del día	Breve repaso del trabajo desarrollado con los sectores
15:30	Coffee Break	
16:00	Conclusiones del día	Breve repaso del trabajo desarrollado con los sectores
17:00	Cierre	

Día 2: Ejercicios avanzados en la preparación del inventario nacional de emisiones de GEI

Hora	Contenido	Detalles
09:00	Introducción	Bienvenida y Agenda
9:15	Trabajo Sectorial	Discusión metodológica, manejo de datos de actividad, criterios de uso de factores de emisión, cálculo de emisiones/remociones de GEI, buena prácticas para la elaboración de inventarios de GEI y temas transversales
10:45	Coffee Break	
11:15	Trabajo Sectorial	Discusión metodológica, manejo de datos de actividad, criterios de uso de factores de emisión, cálculo de emisiones/remociones de GEI, buena prácticas para la elaboración de inventarios de GEI y temas transversales
13:00	Almuerzo	
14:00	Trabajo Sectorial	Discusión metodológica, manejo de datos de actividad, criterios de uso de factores de emisión, cálculo de emisiones/remociones de GEI, buena prácticas para la elaboración de inventarios de GEI y temas transversales
17:00	Cierre	

Día 3: Recapitulación de los días 1 y 2 y temas transversales

Hora	Contenido	Detalles
09:00	Introducción	Bienvenida y Agenda
09:15	Temas Transversales	Discusión sobre temas transversales sectoriales y a nivel de coordinación: Arreglos institucionales (PC); Recolección de datos (PC); Incertidumbre (RH); Análisis de categorías principales (RH); Serie temporal (PC); Garantía y Control de la Calidad (RH); Compilación e informe del Inventario de GEI (PC) - incluyendo experiencia de Chile.
10:45	Coffee Break	
11:15	Temas Transversales	Discusión sobre temas transversales sectoriales y a nivel de coordinación: Arreglos institucionales (PC); Recolección de datos (PC); Incertidumbre (RH); Análisis de categorías principales (RH); Serie temporal (PC); Garantía y Control de la Calidad (RH); Compilación e informe del Inventario de GEI (PC) - incluyendo experiencia de Chile.
12:15	Conclusiones del taller	Breve repaso de las principales conclusiones del taller y tareas pendientes
13:00	Cierre del taller/ Almuerzo	

Taller Introducción a los Informes Bienales de Actualización

14:00	Introducción a los Informes Bienales de Actualización	Presentación y discusión sobre los requerimientos de la Convención para los IBA. Introducción y generalidades del IBA (OZ); Cap. 1 - Circunstancias nacionales y arreglos institucionales (PC); Cap. 2 - Inventario nacional de GEI (PC); Cap. 3 - Acciones de mitigación (RH); Cap. 4 - Necesidades y apoyo recibido (PC); Cap. 5 - Otra Información relevante (RH); Plantilla IBA de GIZ (OZ). Caso de estudio: Primer Informe Bienal de Actualización de Chile ante la CMNUCC (PC)
15:30	Coffee Break	
16:00	Discusión de elementos relevantes para la RD	Plenario sobre la elaboración del IBA de RD
16:30	Conclusiones y próximos pasos	Breve repaso de las principales conclusiones del taller y tareas pendientes
17:00	Cierre	



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