

CGE TRAINING MATERIALS- BIENNIAL UPDATE REPORTS

Institutional Arrangements

A country-driven governance framework has the intention to promote strong coordination and collaboration among multiple decision-making levels, involving partners, stakeholders and sectors in order to create effective institutional arrangements for planning. Establishing such a governance framework requires time and effort from multi-stakeholder task forces, expert working groups and involved citizens. It also requires dedicated capacity development and communications strategies, and especially political will, resources and funding.

A wide variety of examples of successful institutional arrangements for the implementation of national communications (NCs) and upcoming biennial update reports (BURs) can be found, from which it can be concluded that well-designed institutional arrangements, with clearly defined roles and responsibilities for the different partners, ultimately contribute to policy-relevant reports that link climate action to national development priorities and support the implementation of the UNFCCC at the national and local levels through:

1. The establishment of national NC and BUR coordinating entities with strong leadership in the climate change field that engage a broad range of stakeholders, including policymakers, sectorial representatives (from the private sector), the research community and civil society;
2. Technical and institutional capacity-building: training national actors, making data and information publicly available, and maintaining a strong, motivated and stable cadre of public officers to retain institutional capacities;
3. The collection and availability of policy-relevant and reliable data and information.

The intensification of reporting requirements under the UNFCCC through the BURs is seen as an opportunity to establish more continuity in terms of collaboration, information exchange and maintenance of capacities, as well as an opportunity to set up institutional arrangements that can be sustained over time (as opposed to ad hoc institutional arrangements set up for single NC projects).

This document provides an overview of several examples that illustrate how developing countries have designed effective institutional arrangements to complete their NCs. These examples demonstrate the diversity of institutional arrangements that have been established across developing countries, while highlighting some of the overarching lessons learned and best practices that have emerged.

For more information, the following documents provide further descriptions of institutional arrangements:

- National Communications Support Programme reports (<http://ncsp.undp.org>), in particular 'Lessons Learned and Experiences from the Preparation of National Communications' and 'Country papers: Preparation of National Communications from Non-Annex I Parties to the UNFCCC – A Compilation of Lessons Learned and Experiences from Selected Countries'
- World Resources Institute (WRI) Measurement and Performance Tracking Project (MAPT) case studies (<https://sites.google.com/site/maptpartnerresearch>)

1. BUILDING STRONG LEADERSHIP

Example 1: A climate change cell with a leading role

<i>Country:</i>	<i>Afghanistan</i>
Leading institution:	National Environment Protection Agency
Other institutions involved:	Not mentioned
Purpose of the institutional arrangement:	Establishing a national NC coordinating entity with strong leadership
Succinct description of the institutional arrangement:	In Afghanistan, the National Environmental Protection Agency established a climate change cell, which was staffed with technical experts from a variety of areas. These experts received a briefing on the objectives of the UNFCCC and obligations of member countries and proceeded to coordinate climate change initiatives among relevant ministries. They also managed the input from various institutions that was used to prepare the NC. This approach ensured that government data sources could be used as a coherent source of information, reducing uncertainties that result from using different data sources.
Additional information:	http://ncsp.undp.org/sites/default/files/National%20Communications_Lessons%20Learned.pdf

Example 2: Strengthening institutional anchorage of climate change work

<i>Country:</i>	<i>Philippines</i>
Leading institution:	Bureau of Environmental Management
Other institutions involved:	Not mentioned
Purpose of the institutional arrangement:	Establishing a national NC coordinating entity with strong leadership
Succinct description of the institutional arrangement:	In the Philippines, the Bureau of Environmental Management (Department of Environment) served as the Secretariat of the inter-agency Committee of Climate Change and was the technical focal point for the preparation of the country's initial national communication (INC) and second national communication (SNC). This arrangement has been changed for the third national communication (TNC). Now the Climate Change Office, under the Climate Change Commission, is in charge, and at a level just under the President, in order to ensure access to data and high-level engagement at the ministerial level. The Climate Change Commission also oversees implementation of the National Climate Change Strategy.
Additional information:	http://ncsp.undp.org/sites/default/files/National%20Communications_Lessons%20Learned.pdf

Example 3: Involving, coordinating and networking with relevant stakeholders for NC reporting

<i>Country:</i>	<i>Niger</i>
Leading institution:	National Council of Environment and Sustainable Development (CNEDD), created under the Prime Minister's Cabinet
Other institutions involved:	Public and para public services; non-governmental organizations (NGOs); research, training and academic institutions; civil society; private sector
Purpose of the institutional arrangement:	Strong leadership to implement the UNFCCC at the national level
Succinct description of the institutional arrangement:	<p>Niger has developed a National Plan for the Environment for Sustainable Development (PNEDD), which constitutes its national Agenda 21. Created in January 1996, the CNEDD coordinates the six PNEDD priority programmes. To this end, specialized technical committees, including the Technical Commission of Climate Change and Variability (CTCVC), were created. The CTCVC was founded in 1997 and comprises representatives from public and parapublic services; NGOs; research, training and academic institutions; civil society; and the private sector. Its mission is to support the Executive Secretariat (SE) of the CNEDD in the implementation of the Programme on Variability and Climate Change, and it is one of the six priority programmes of PNEDD, whose main objective is the implementation of the provisions of the UNFCCC at the national level. The preparation of NCs was placed under SE/CNEDD, the focal point of three post-Rio conventions, including those on climate change (e.g. the UNFCCC). The SE/CNEDD hosts the Project Management Unit (PMU) to ensure the implementation of development projects of NCs under the supervision of the CTCVC.</p> <p>The institutional anchoring of SE/CNEDD, the institution responsible for developing NCs, as well as a multidisciplinary and participatory approach used in the development of NCs, has created a dynamic and collaborative work between actors (state, civil society, private sector) and specialists in various fields (e.g. agriculture, livestock, forestry, water resources, energy, economy, communications, meteorology, climatology, health). This dynamic must be maintained for the development of future NCs and implementation of projects from the national adaptation programme of action (NAPA), Pilot Programme on Climate Resilience (PPCR) and other initiatives related to climate change and variability.</p>
Additional information:	SNC of Niger, and http://ncsp.undp.org/sites/default/files/Country_papers_Final_Version_1.pdf

Example 4: Establishing a national coordinating entity with strong leadership at the national and subnational levels

<i>Country:</i>	<i>Mexico</i>
Leading institution:	National Institute of Ecology and Climate Change (SEMARNAT)
Other institutions involved:	A permanent Inter-ministerial Commission on Climate Change was established in January 2013. Headed by the President of Mexico, it includes the following ministries: Interior; Foreign Affairs; Finance; Energy; Agriculture, Livestock, Rural Development, Fisheries and Food; Public Education; Tourism; Environment and Natural Resources; Economy; Communications and Transport; Health; Marine; and Social Development.
Purpose of the institutional arrangement:	Establishing a national coordinating entity with strong leadership at the national and subnational levels
Succinct description of the institutional arrangement:	<p>In Mexico, The National Institute of Ecology (INE) established a climate change cell in 1993. The Country Study Programme on Climate Change was developed from 1994 to 1996; as part of its development, several workshops were coordinated with scientists and technicians from the National Autonomous University of Mexico (UNAM) and other universities. The results of the Country Study, which included the first Greenhouse Gas Emissions National Inventory and the first studies on adaptation and mitigation, were a large input to the INC of Mexico, which was submitted to the UNFCCC in 1997.</p> <p>It is important to mention that the core team who worked on the first to the fifth NC (submitted in 2012) remained almost the same, as did the other Mexican institutions involved in the process.</p> <p>At the beginning of 2009, the INE prepared materials and commenced providing training on the elaboration of greenhouse gases (GHGs) and on emissions and climate scenarios to the Mexican states so that they could elaborate their own state programmes on climate change.</p> <p>To date, all Mexican states are involved. Eleven have completed their plans, five have established inter-ministerial commissions on climate change, and some have published state laws related to climate change. The states have received funds from the Mexican Government, as well as from the United Kingdom, Spain, France and Japan, and from the Inter-American Development Bank and The World Bank.</p> <p>In December 2012, Local Governments for Sustainability (ICLEI) and the INE, with funds from the UK, commenced working on Municipal Action Programmes on Climate Change (PACMUNs). By July 2013, 30 PACMUNs were completed and 255 more were in the pipeline. There are 2,558 municipalities in Mexico, so the scope for the project is large.</p> <p>The General Law on Climate Change was published in June 2012. It defines the institutional framework for adaptation and mitigation actions in Mexico and divides responsibilities among the three levels of government (federal, state and municipal). The Law has established, among other institutions, a Climate Change Council and an Inter-Ministerial Commission on Climate Change, and for planning, a National Strategy on Climate Change and a Special Programme on Climate Change.</p> <p>The INE was transformed into the National Institute of Ecology and Climate Change.</p> <p>In June 2013, the National Strategy on Climate Change's Vision 10-20-40 was established, and its Special Programme on Climate Change (2013–2018) will be launched at the end of 2013.</p>
Additional information:	http://www.inecc.gob.mx

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Other examples of establishing national NC coordinating entities with strong leadership:

With three NCs completed and its fourth underway, Uruguay is a frontrunner in terms of NCs. Part of its success is due to the establishment early on, during preparation of the country's INC, of an Inter-ministerial National Climate Change Response Committee that advises the Ministry of Environment. This Committee has contributed significantly to promoting Uruguay's climate change actions.

Example 5: Inter-ministerial, cross-sectoral coordination

<i>Country:</i>	<i>Belize</i>
Leading institution:	Ministry of Natural Resources and the Environment
Other institutions involved:	Ministries of Fisheries and Agriculture and Economic Development, the Public Utilities Commission, and the Departments of Meteorology, Environment and Geology
Purpose of the institutional arrangement:	Inter-ministerial, cross-sectoral coordination
Succinct description of the institutional arrangement:	In Belize, the coordinating entity for NCs is the Ministry of Natural Resources and the Environment, which is backed up by a broad range of other ministries and governmental agencies that participate in the NC process. These include the Ministries of Fisheries and Agriculture and Economic Development, the Public Utilities Commission, and the Departments of Meteorology, Environment and Geology. All institutions formed a Climate Change Committee that oversaw the development of the SNC. Memorandums of understanding ensure that information provided from the private sector is used for NC preparation only and not, for example, to increase taxes on companies.
Additional information:	http://ncsp.undp.org/sites/default/files/National%20Communications_Lessons%20Learned.pdf

Other examples of inter-ministerial, cross-sectoral coordination:

In **Bangladesh**, five core sectoral working groups were formed for working on five components of the SNC, and these groups provided guidance to the technical staff developing each component. The groups were multidisciplinary, represented governmental and non-governmental institutions and academia, and met at least four times per year to monitor the progress of the activities and provide recommendations to improve the quality of the NC.

The NC country team in **Samoa** has representatives from all main ministries and NGOs. The Ministry of Environment is the lead organization, and the Ministry of Finance co-chairs the team, showing the significance that financing matters are given to climate change in Samoa.

In **Sierra Leone**, a range of ministries is involved in NC preparation, with the Coordination Unit located in the Ministry of Transport and Aviation rather than in the Ministry of Environment. This set-up, with its inclusion of a number of ministries, balances the NC workplan between ambition and what can realistically be achieved.

In **Tuvalu**, NC preparation is overseen by an inter-ministerial steering committee and engages the Ministry of Environment and the Ministries of Natural Resources,

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Education, Health, Work, Energy and Finance, as well as the National Climate Change Office, NGOs, consultancies and research institutions.

Uruguay surveyed more than 100 representatives from governmental sectors, NGOs and academic and private institutions to identify problem areas and solicit their impressions of the national situation.

Fiji opted to have its thematic working groups co-chaired by both government and NGO representatives, building upon the knowledge and expertise of the NGOs by conducting a number of climate change-related projects. This co-chairing increased national ownership of the process.

The **Cook Islands** engaged a particularly broad range of stakeholders in its country team, not only including an inter-ministerial steering committee, NGOs and research institutions, but also involving community leaders, the religious advisory council and traditional leaders. The country team was backed up by a strong secretariat that provided management and administrative services.

Bolivia explicitly involved women's associations and indigenous groups throughout consultations and meetings for its NC preparation and took particular care to include the interests of these groups in the measures and recommendations set forth in the NC itself.

Example 6: Experience with management arrangements to prepare and sustain the NC work

<i>Country:</i>	<i>Albania</i>
Leading institution:	Ministry of Environment, Forestry, and Water Administration
Other institutions involved:	Ministry of Economy, Trade and Energy, Ministry of Agriculture and Food, Ministry of Public Works and Transport, Ministry of Health, Ministry of Tourism, Ministry of Integration, Institute of Statistics (INSTAT), universities and other academic institutions, General Directorate of Civil Emergencies, and interested NGOs
Purpose of the institutional arrangement:	Multi-stakeholder, multi-sector and multi-level participation
Succinct description of the institutional arrangement:	<p>Overall, the Government of Albania has considered the preparation of NCs a highly valuable exercise and has given past NCs substantial resources and effort. Many institutions and specialists have been trained and institutional capacity has been built and sustained. To ensure country ownership, NC projects are designed to integrate extensive stakeholder consultations during stocktaking exercises and during implementation to ensure that goals and objectives are consistent with national sustainable development priorities. In line with the findings of the NCs, climate change has been addressed in other policy papers and sectorial strategies. Resources have been mobilized.</p> <p>Challenges and steps taken to address them:</p> <ol style="list-style-type: none">The lack of a permanent coordinating body regarding climate change issues. <p>A Steering Committee was established for the INC, SNC and TNC, but continuity has been hindered. During the TNC process, efforts were made to establish the Inter-ministerial Committee on Climate Change. This would be headed by the Deputy Minister of Environment, and supported by technical</p>

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Country: *Albania*

focal points from all related institutions.

ii. The lack of specific legislation to address the basis for climate change issues with a special focus on future updates to the GHG inventory.

A legal document has been drafted to tackle this shortcoming, and its integration is a part of the efforts Albania is making to harmonize its environmental legislation with that of the European Union (EU).

iii. The potential lack of qualified technical personnel.

There has been much institutional capacity developed through the NC preparation process. However, to date, NC preparation has been secured through personnel hired for each project, with the individuals coming mainly from academic institutions and being trained in technical aspects. In order to maintain capacity built in NC processes, such as in national GHG inventory and mitigation and in vulnerability and adaptation, members of the technical teams have been retained. This ensures institutional memory can be preserved, including knowledge of limitations, obstacles and challenges associated with NC development. Experience with past projects also helps ensure coherence, continuity, stakeholder participation and the exploitation of pertinent synergies.

iv. The establishment of processes that allow consultation with a broad range of stakeholders at all stages (stocktaking, inception and implementation).

a. Stocktaking processes help stakeholders:

- Understand climate change and environment issues and trends occurring in the country;
- Strengthen stakeholder capacity on climate change and environment issues;
- More easily access data
- Understand the preferred geographical and sectoral focus.

b. The Inception stage is crucial in helping all partners fully understand and take ownership of the overall NC process. At this stage, roles, functions and responsibilities within the project's decision-making structures, including reporting and communication lines, are discussed, and conflict resolution mechanisms are established.

c. Consultations during implementation will produce sound and acceptable results. Not only will broad stakeholder involvement promote appropriate policy proposals, it will also generate the improved knowledge, methodologies and human and institutional capacities that are necessary for the continued success of the NC process.

v. The lack of adequate resources for a sustainable process.

The Government of Albania considers the preparation of NCs a critical part of its efforts to cope with the impacts of climate change. However, resources for NC activities are scarce due to Albania's pressing social and development needs. Therefore, UNDP and GEF support is critical for the sustainability of the NC process.

Additional information: http://ncsp.undp.org/sites/default/files/Country_papers_Final_Version_1.pdf

Other examples of multi-stakeholder, multi-sector and multi-level participation:

In **Armenia**, details on government roles have been provided for each key sector analysed in the SNC. Clear roles have also been established for the Ministry of Environment and the Climate Change Unit that led the NC preparation, as well as for the ministries, academic institutions, research institutions and NGOs involved.

Iraq, Kuwait and Oman have benefited from a clear allocation of responsibilities among the leading agencies, including their ministries of environment and national climate change unit, as well as research institutions and the UNEP Regional Office for West Asia, a co-executing agency. National task forces and working groups have been established, supported and mentored by regional and international experts.

In **Bhutan**, while the coordination of climate change issues has been mandated to the National Environment Commission, the responsibility of hydro-meteorological observation and services has been a matter of competing interests between the Division of HydroMeteorological (HydroMet) Services of the Ministry of Economic Affairs and the Agromet Section of the Department of Agriculture under the Ministry of Agriculture and Forests. The most recent arrangement is upgrade of the hydromet division to the Department of Hydromet Services under the Ministry of Economic Affairs.

2. TECHNICAL AND INSTITUTIONAL CAPACITY-BUILDING

Example 7: Internalizing the NC process for institutional capacity-building

<i>Country:</i>	<i>Thailand</i>
Leading institution:	National Climate Change Policy Committee, chaired by the Prime Minister
Other institutions involved:	Office of Natural Resources and Environmental Policy and Planning, Ministry of Natural Resources and Environment
Purpose of the institutional arrangement:	Technical and institutional capacity-building
Succinct description of the institutional arrangement:	The preparation of Thailand's INC and SNC was carried out by academic institutions. However, it has been decided that the country's implementing agency – the National Climate Change Policy Committee – will undertake preparation of the TNC, the upcoming BURs and future reporting in order to improve the country's institutional capacity. The National Climate Change Policy Committee was established in 2005, is chaired by the Prime Minister, and is composed of various high-level secretaries.
Additional information:	Thailand's TNC and BUR Project Proposal, and http://ncsp.undp.org/sites/default/files/National%20Communications_Lessons%20Learned.pdf

Other examples of technical and institutional capacity-building:

Iran included on its inter-ministerial steering committee a broad range of ministries, including Petroleum, Energy, Industry, Mines and Commerce, Agriculture, Domestic Affairs, and Housing, as well as its national meteorological organization, universities and research institutes. The anchoring of NC work among these ministries ensured the availability of writing skills to elaborate the complex procedures and analyses in an NC.

While the preparation of its INC relied largely on the work of external consultants, the Philippines has moved NC preparation to government institutions. It has been decided that for the SNC no international consultant should be hired; with the help of

experts from the Intergovernmental Panel on Climate Change (IPCC), this will expand the government institutions' capacity.

In order to better retain the knowledge that comes from the NC process, the National Climate Change Committee in Namibia has decided that ministry staff, rather than consultants, will prepare Namibia's TNC. With an eye on inevitable staff turnover, there is also a focus on building institutional memory through the systematic sharing of information among colleagues.

3. DATA AND INFORMATION COLLECTION AND SHARING

Example 8: Initiating and sustaining a national GHG inventory system

<i>Country:</i>	<i>India</i>
Leading institution:	Ministry of Environment and Forests
Other institutions involved:	The Planning Commission, the India Meteorological Department, and the Ministries of Agriculture; Environment and Forests; Coal; Power; New and Renewable Energy; Heavy Industries and Public Enterprise; Shipping; Road Transport and Highways; Petroleum and Natural Gas; Chemicals and Fertilizers; Commerce and Industry; Steel; Science and Technology; Finance; Water Resources; Health and Family Welfare; and External Affairs
Purpose of the institutional arrangement:	Data and information collection and sharing
Succinct description of the institutional arrangement:	<p>The National Steering Committee (NSC) is chaired by the Secretary, from the Ministry of Environment and Forests. The NSC currently has 27 members who are principal advisers, secretaries, joint secretaries and directors-general from various institutions. The NSC meets one to two times a year and reviews the inventory development process and its progress vis-à-vis the timelines set out at the beginning of the inventory preparation cycle. The NSC members, representing the line ministries managing activities that are sources of emissions, also review the activity data and estimated GHG emissions for their respective sectors. These GHG experts have an in-depth familiarity with IPCC guidelines and their development, and experience in (i) GHG emissions inventory estimation and GHG emissions measurements; (ii) the review process of the Annex I GHG emissions inventory; and (iii) working in coordination with a large number of institutions and policymakers.</p> <p>Actual inventory preparation is done by sectoral inventory expert groups (IEGs) constituted for each of the energy, industry, agriculture, land use, land-use change and forestry (LULUCF) and waste sectors. The IEGs are drawn from a network of institutions and possess core competencies in GHG and pollutant measurement, monitoring, estimating and policy research. Furthermore, the lead experts in each IEG, who are also the coordinators of their respective IEGs, have through the years been part of the development of the IPCC 1995, 1996 and 2006 Guidelines for National Greenhouse Gas Inventories and the IPCC 2000 and 2003 Good Practice Guidance and Uncertainty Management in National Greenhouse Gas Inventories, and they also have participated in the national GHG emissions inventory preparation process in their respective sectors since 1991. The IEG coordinators' mandate is to ensure the scientific rigour of the process and adherence to the IPCC guidelines.</p> <p>The GHG inventory estimation network includes laboratories of the Council</p>

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<i>Country:</i>	<i>India</i>
	<p>of Scientific and Industrial Research, the institutions under the aegis of the Indian Council of Agriculture Research (ICAR), the Forest Survey of India, the Indian Council of Forest Research, the Indian Institute of Science, the National Remote Sensing Centre, the Indian Institute of Management, industry associations (e.g. the Cement Manufacturing Association, the Confederation of Indian Industries), universities (e.g. Jadavpur University) and NGOs (e.g. The Energy Resource Institute). About 32 institutions are involved in the process. Each of these is awarded contracts by the Ministry of Environment and Forests through its Project Management Consultants (PMC) with specific terms of reference for preparing aspects of the GHG emissions inventory. The NSC and the IEGs have been in place since the INC process started. Some members have been added to the NSC and the IEGs for the SNC. The incentive for NSC members to continue from one NC to the next has mainly been the government's commitment to the UNFCCC. Changes in government every five years has not posed a risk to the process. As for the IEG members, being part of the process gives them recognition in the climate change research and development arena within the country as well as globally. NSC members are invited to annual workshops where the IEG coordinators present the status of the GHG emissions inventory. If there are data gaps, NSC members in the workshop take note of them and, as a response to a formal request from the Ministry of Environment and Forests, provide the required data if generated by any one of them as a part of their mandate.</p>
Additional information:	Annex A, and WRI case study: https://docs.google.com/viewer?a=v&pid=sites&srcid=ZGVmYXVsdGRvbWFpbmxtYXB0cGFydG5lcnJlc2VhcmNofGd4OjEzYjk5ZDA3OTU3YTZkY2E

Similar case studies have been shared by WRI for **Brazil, Colombia, Mexico and South Africa.**

Example 9: A sustainable national GHG inventory system

<i>Country:</i>	<i>Macedonia</i>
Leading institution:	Ministry of Environment and Physical Planning
Other institutions involved:	Research Centre for Energy, Informatics and Materials (ICEIM-MANU) of the Macedonian Academy of Sciences and Arts, and sectoral experts
Purpose of the institutional arrangement:	Reliable data and high quality GHG inventories
Succinct description of the institutional arrangement:	<p>The first good practice in preparing a national GHG inventories is to structure the national GHG inventory team (Annex B) in such a way as to enable the maximum possible extent of control and quality assurance of the input data and estimated emissions. The national GHG inventory team for Macedonia thus included the following entities:</p> <ul style="list-style-type: none">• Ministry of Environment and Physical Planning, responsible for supervising the national inventory process and reporting the emissions to the UNFCCC;• ICEIM-MANU, responsible for coordinating and supervising the preparation of inventories;• Sectoral experts (two for each sector):

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<i>Country:</i>	<i>Macedonia</i>
	<ul style="list-style-type: none"> • The enterer, responsible for identifying and verifying data sources, and entering and documenting the input data; • The checker, responsible for checking and validating the input data and emission estimates. <p>The enterer works in parallel with the checker on filling values for activity data and emission factors in the IPCC database and the documenting table. The checker is in charge of the validation of the input data. The checker reviews all the activity data and emission factors and either confirms their correctness by checking the corresponding validation field in the documenting table or signals any irregularities. In case of detected errors, both sectoral experts perform a recalculation of emissions in order to determine the corrective actions and prepare a validation report confirming the accuracy of the input data and emission estimates, as well as to confirm that the adopted procedures for inventory compilation have been appropriately implemented. To ensure uniformity and consistency in reporting, a template documenting table was created by the ICEIM-MANU and provided to the sectoral experts. A documenting table should be filled in for each activity.</p> <p>This documenting procedure might appear to create additional paperwork; however, it has resulted in a more reliable time series of high quality inventories and it serves as training material for the preparation of future GHG inventories in the country.</p> <p>The database is stored in the Ministry of Environment and Physical Planning.</p>
Additional information:	http://ncsp.undp.org/sites/default/files/Country%20papers%20Final%20Version_1.pdf

Example 10: Clear responsibilities and tasks of multiple stakeholders in the GHG inventory

<i>Country:</i>	<i>Moldova</i>
Leading institution:	Ministry of Environment (MENV), Climate Change Office (CCO)
Other institutions involved:	Ministry of Transport and Roads, Ministry of Industry and Infrastructure, Ministry of Economy and Trade, Ministry of Information Development, Ministry of Agriculture and Food Industry, Ministry of Defence, Ministry of Health, Ministry of Internal Affairs, Academy of Sciences of Moldova, Forest Agency, Agro industrial Agency, Land Relations and Cadastre Agency, Civil Aviation State Administration, Customs Service, State Ecological Inspectorate, National Ozone Committee within MENR, IPROCOT State Projections Institute, and state enterprises Moldovan Railways and Moldovagaz
Purpose of the institutional arrangement:	Clear responsibilities and tasks of multiple stakeholders in the GHG inventory
Succinct description of the institutional arrangement:	<p>Within the CCO, the first working group “GHG Inventories” is responsible for activities related to the GHG inventory preparation process.</p> <p>The “GHG Inventories” Team Leader, a full-time employee in the CCO, supervises the estimation of emissions by individual categories of sources and removals by individual categories of sinks; Key Sources Analysis (KSA); uncertainty analysis interpretation; Quality Assurance (QA) and Quality Control (QC) activities; documentation and archiving of the data</p>

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<i>Country:</i>	<i>Moldova</i>
	<p>used in the inventory preparation process; and synthesis of sectoral reports that serve as the basis for compilation of the National Inventory Report (NIR).</p> <p>National experts (hired on a contract basis) are responsible for estimating emissions by individual categories of sources and removals by individual categories of sinks at the sectoral level (energy, industrial processes, solvents and other products use, agriculture, LULUCF and waste). The national experts are also responsible for development of components of the NIR's sectoral chapters; activity data collection; application of decision trees in terms of selecting suitable assessment methods and emission factors; estimating emission uncertainties by individual categories of sources; and taking corrective measures as a response to QA and QC activities.</p> <p>The activity data needed for the inventory is available in the statistical yearbooks, energy balances and sectoral statistics publications of the National Bureau of Statistics (NBS) of Moldova.</p>
Additional information:	Annex C and Moldova's SNC

Example 11: A connected GHG inventory working group with clear responsibilities

<i>Country:</i>	<i>Ghana</i>
Leading institution:	Environment Protection Agency
Other institutions involved:	Energy Commission, Forestry Commission, Ministry of Food and Agriculture (Crop Services Directorate), University of Ghana (Statistics Department), Ghana Statistical Service, Forestry Research Institute, and the Environmental Application and Technology (ENAPT) Centre
Purpose of the institutional arrangement:	Clear responsibilities and tasks of multiple stakeholders in the GHG inventory
Succinct description of the institutional arrangement:	<p>The Greenhouse Gas Inventory Working Group (GHGI-WG) will:</p> <ol style="list-style-type: none">1. Supervise, monitor and provide feedback to national consultants and experts recruited to provide technical assistance or undertake specific assignments relating to updating the national GHG inventory process;2. Liaise with ministries, national and international research institutes, NGOs and other relevant institutions in order to involve their staff, national experts and consultants in project activities, and to gather and disseminate information relevant to Ghana's GHG inventory;3. Contribute to the development and finalization of the scope of the work, workplan (including timeline, budget and reporting outline) and terms of reference of the GHGI-WG required to identify and facilitate recruitment of national and/or international experts and consultants;4. Help to summarize and synthesize the results of the GHGI-WG for incorporation into the TNC;5. Compile the scope and content of the relevant sections;6. Provide overall supervision and ensure the timely implementation of the project-relevant activities as scheduled in the workplan;7. Review and comment on all draft documents prepared by consultants

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Country: *Ghana*

and experts;

8. Contribute to strengthening and mainstreaming the national system for producing the GHG inventory and making it relevant to the BUR;

9. Participate as necessary in international reviews that may arise from the submission of Ghana's initial BUR in December 2014, which is likely under the international consultation and review mechanism in the Cancun decisions.

The institutional arrangement for the BUR should be structured in a sustainable and efficient manner to allow production of the BUR on time, to the required standard and on budget. There is strong synergy with the BUR institutional arrangement and the existing national system for the GHG inventory as well as the overall national communication process. The working teams of the TNC (in particular, national circumstances, GHG inventory and mitigation assessment) should work in tandem with each other under a single coordinating entity, which will be the Environmental Protection Agency (EPA) for the TNC and BUR.

Additional information: Annex D

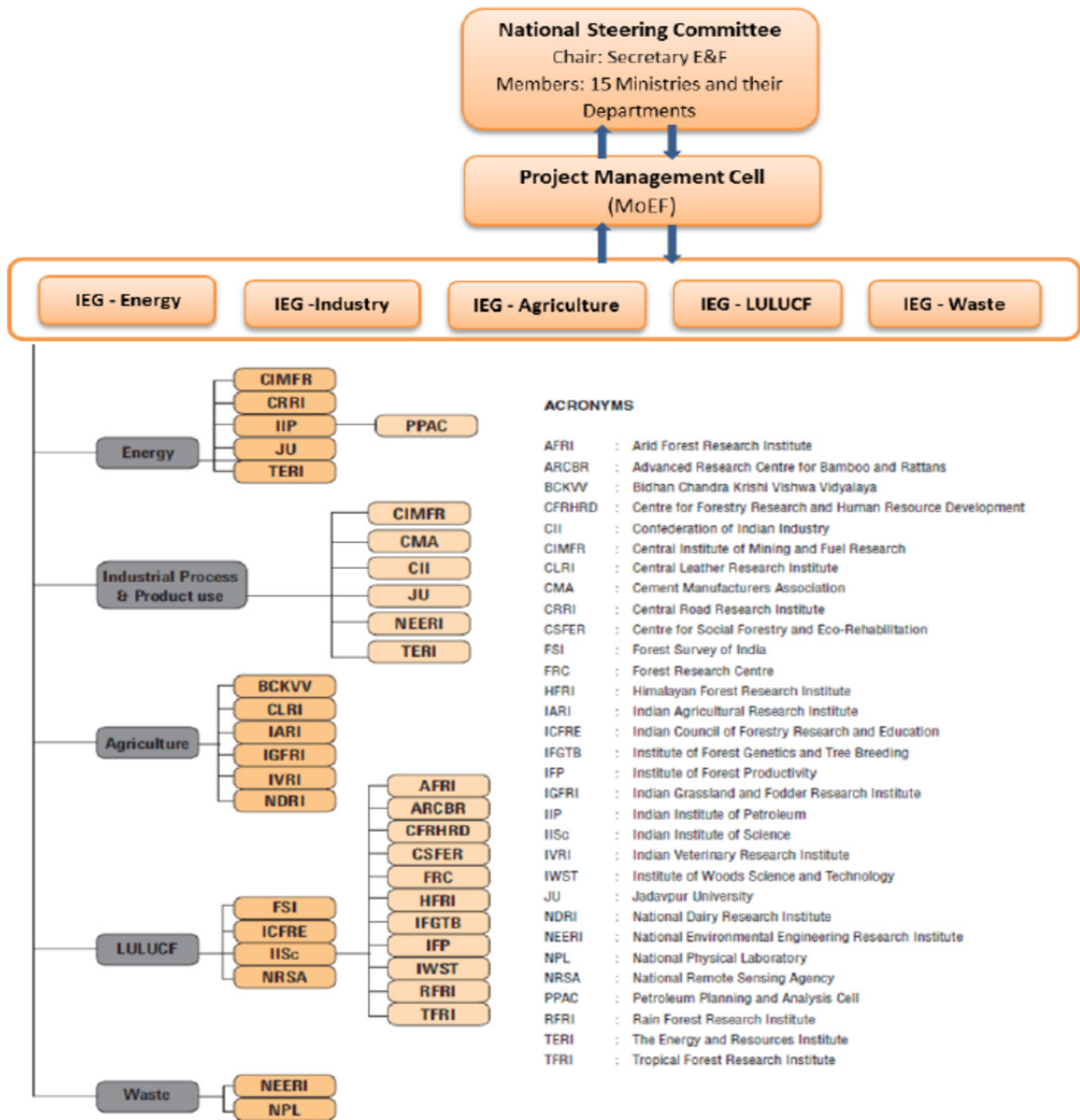
Other examples of institutional arrangements for data and information collection and sharing:

Bosnia and Herzegovina, Tajikistan and Uzbekistan have employed a variety of ways to close data gaps, including the establishment of memorandums of understanding between relevant institutions to facilitate data sharing.

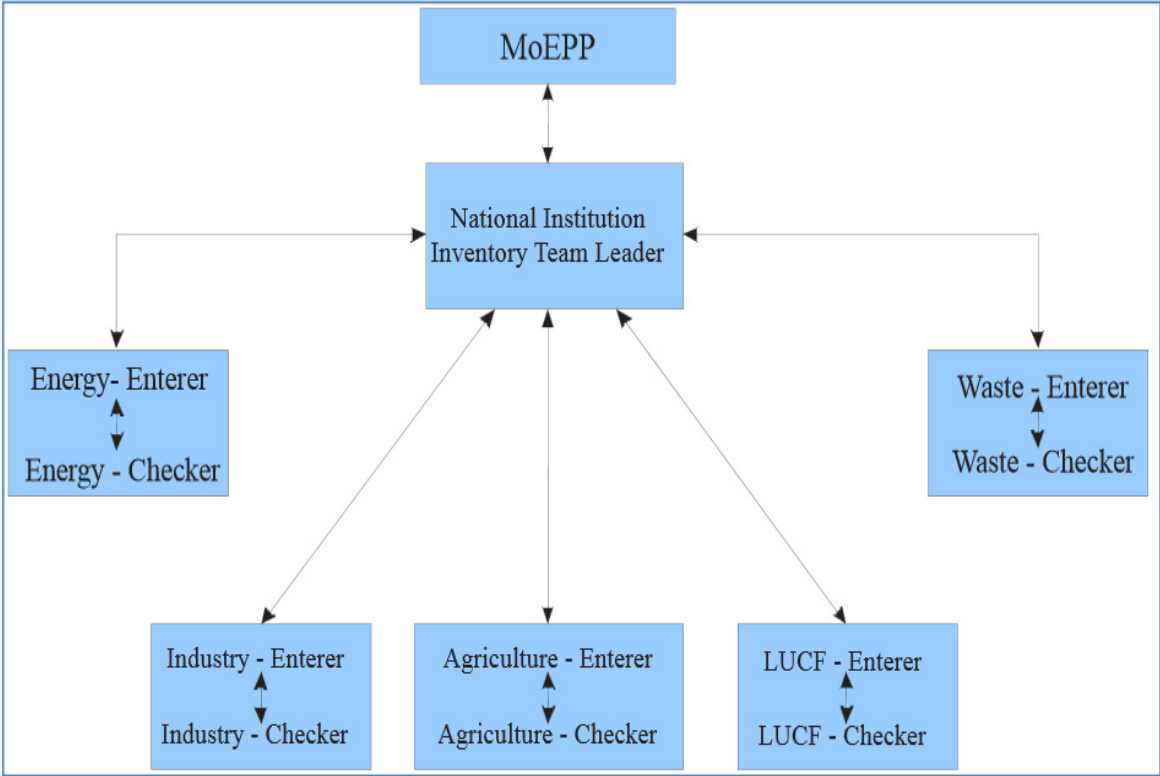
Bangladesh conducted surveys on activity data in order to close data gaps in its GHG inventory. These were accompanied by training courses for professionals working in agriculture, livestock and enteric fermentation, land-use change and forestry, and municipal solid waste management in divisional headquarters and district towns. The training ensured that the surveys generated quality data.

In **Uruguay**, most data required for the various components of the NC have been compiled on a regular basis since the early 1990s. This has provided a strong foundation for necessary studies and assessments. Given that the country's population and economic activities are highly centralized (mostly around Montevideo's metropolitan area), data compilation does not pose a major challenge and data gaps are not an important constraint in the country.

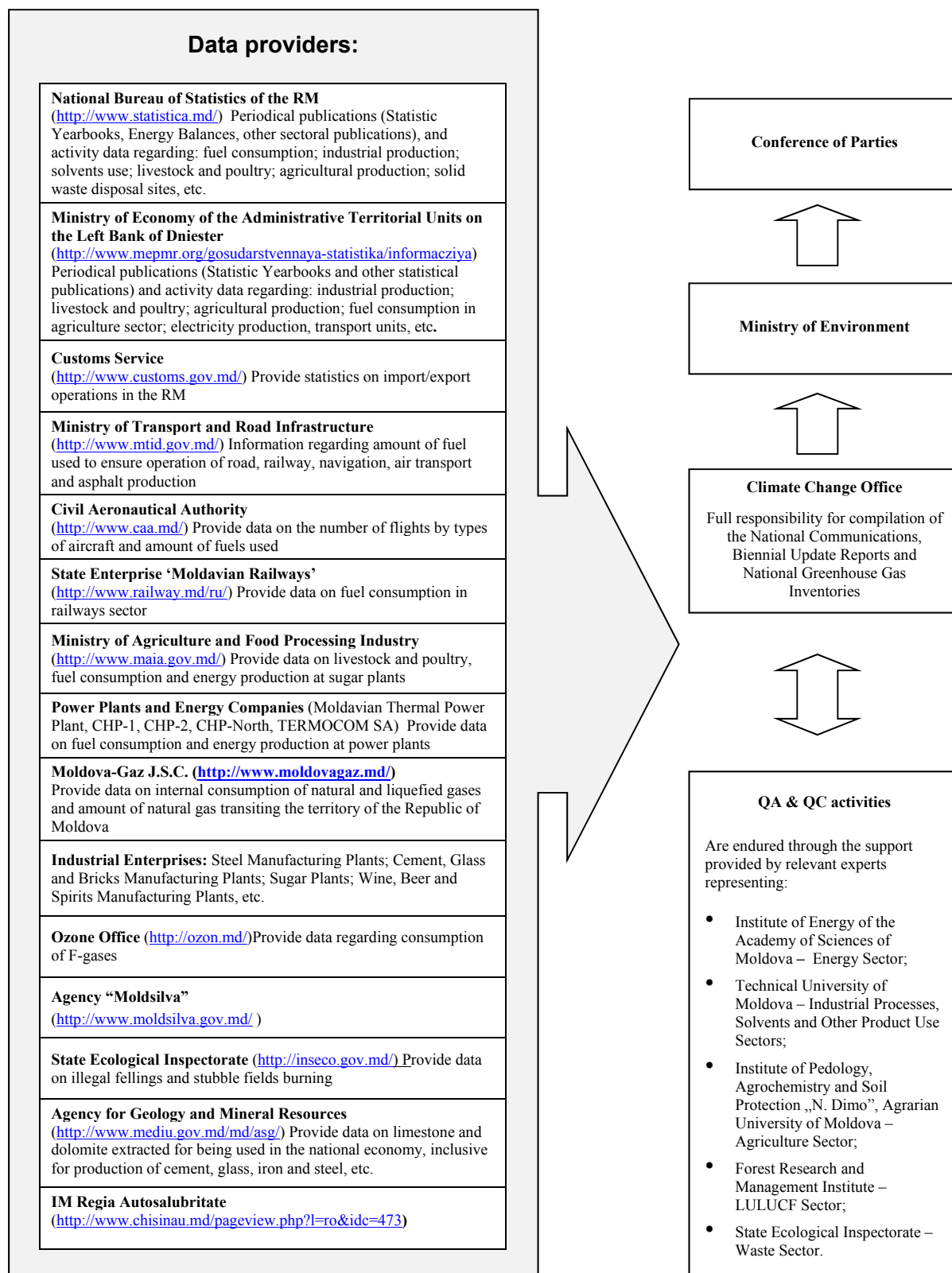
Annex A. India: Initiating and sustaining a national GHG inventory system: The Indian National GHG Inventory Management System



Annex B. Macedonia: A sustainable national GHG inventory system



Annex C. Moldova: Institutional arrangements for GHG data collection and quality control



Annex D. Ghana: A connected GHG inventory working group with clear responsibilities

