National
Communications
Support
Programme

THE NATIONAL COMMUNICATIONS PROCESS

UNDP UNEP GEF

NATIONAL COMMUNICATIONS SUPPORT PROGRAMME
RESOURCE KIT

CONTENTS

1 BACKGROUND

1.1 The UNFCCC Context

The United Nations Framework Convention on Climate Change (UNFCCC) entered into force on 21 March 1994 and sets an overall framework for intergovernmental efforts to tackle the challenge posed by climate change. All Parties must report on the steps they are taking or envisage undertaking to implement the UNFCCC (Articles 4.1 and 12.1) by: "reporting to the Conference of the Parties (COP) on emissions by sources and removals by sinks of all greenhouse gases not controlled by the Montreal Protocol (greenhouse gas inventories); national or, where appropriate, regional programmes containing measures to mitigate, and to facilitate adequate adaptation to climate change (general description of steps taken or envisaged by the Party to implement the Convention); and any other information that the Party considers relevant to the achievement of the objective of the Convention." (UNFCCC, 2003)

As of January 2007, 134 non-Annex I countries had submitted their Initial National Communications to the UNFCCC, three had submitted Second National Communications and one had submitted a Third National Communication.

To view the countries that have submitted their national communications, or to download the reports, go to:
http://unfccc.int/national_reports/non-annex_i_natcom/items/2979.php

1.1.1 Guidelines for non-Annex I Parties

In 1996, guidelines for the preparation of initial national communications from non-Annex I Parties were adopted by the Second Conference of the Parties (COP). These guidelines were outlined in Decision 10/CP.2. In 2002, the Eighth COP adopted revised guidelines, which are contained in the annex to Decision 17/CP.8.

Decision 17/CP.8 can be downloaded at:
http://unfccc.int/files/meetings/workshops/other_meetings/application/pdf/dec17-cp.pdf

The UNFCCC User Manual provides guidance on interpreting Decision 17/CP.8. It is available in English, French and Spanish and can be downloaded at:
http://unfccc.int/national_reports/non-annex_i_natcom/guidelines_and_user_manual/items/2607.php

The timing of submission for Second and, where appropriate, Third National Communications was agreed at the Eleventh COP in 2005. Under the decision, non-Annex I Parties have four years from the initial disbursement of financial resources for the actual preparation of the national communication although, if necessary, and based on their national circumstances, they may use an extension of up to one year for submission after having informed the Secretariat.

1.1.2 Submitting a National Communication

Countries can submit their national communication to the UNFCCC in any of the official UN languages (English, Spanish, French, Russian, Arabic, Chinese), although English is encouraged to enhance sharing of information. The Executive Summary must be in English.

The meetings of the COP and Subsidiary Bodies (SB) provide an avenue for publicising a submission, as the UNFCCC invites non-Annex I Parties to share their experiences at hosted side-events.

Additional resources
- For general information on the UNFCCC, visit the website: *http://unfccc.int*
- For COP decisions on national communications, technology transfer, financial and technical assistance, and capacity building, visit: *http://unfccc.int/documentation/decisions/items/3597.php*

1.2 Financial and Technical Assistance for Preparing National Communications

1.2.1 The Global Environment Facility

The Global Environment Facility (GEF) provides financial assistance to non-Annex I Parties to prepare their national communications under guidance from the COP. This financing is made available under projects called "enabling activities", which are implemented through the United Nations Development Programme (UNDP), the United Nations Environment Programme (UNEP) and World Bank.

More than 130 non-Annex I Parties have received GEF funding for national communications and are at different stages of implementation. The majority are preparing Second National Communications, with eight working on Initial National Communications and one (Uruguay) on its Third National Communication (Mexico was the first country to submit a Third National Communication, during the Twelfth COP held in Nairobi, Kenya, in November 2006).

To see the status of national project implementation, go to:
http://ncsp.undp.org/prj_list.cfm?type_id=99&regionid=98

Key differences between funding for Initial and Second National Communications

Countries that chose expedited funding for their Initial National Communications received up to $350,000. For Second National Communications, this sum has risen to $420,000, which includes $15,000 for an initial stocktaking exercise, stakeholder consultations and the preparation of the project proposal. This preliminary exercise is a critical step so that Second National Communications build on the results, experiences and lessons learned of Initial National Communications, thus ensuring improvements are carried out in a more cost-effective manner and are not duplicative.

To date, four countries have requested a funding amount greater than $420,000 for Second National Communications, following the GEF procedures for full-size projects. The request results in a lengthier funding request cycle and requires a more detailed project document. Under both the expedited and full-size approaches, more monitoring and evaluation is expected as part of the implementation process.

One important aspect of preparing a national communication has always been how to ensure the document can be effectively mainstreamed into the national planning agenda and add value to in-country programming. Countries should consider if there are projects (e.g. mitigation, adaptation) that can be based on the national communication outputs. For Least Developed Countries (LDCs), the National Adaptation Programmes of Actions (NAPAs) should input to Second National Communications adaptation assessments in order to avoid duplication of efforts and ensure coherent integration of adaptation needs into national development planning. (NAPAs identified priority activities to respond to the urgent needs of LDCs regarding adaptation to climate change.)

For general information on the GEF, visit the website:
http://thegef.org

1.2.2 The United Nations Framework Convention on Climate Change Secretariat

One function of the UNFCCC Secretariat is to facilitate the provision of financial and technical assistance to non-Annex I Parties as they prepare national communications. One mechanism for providing assistance is through the **Consultative Group of Experts on non-Annex I National Communications** (**CGE**). The CGE has been conducting regional hands-on training workshops on greenhouse gas inventories, vulnerability and adaptation (V&A) assessments, and a global one on mitigation analysis in the context of the preparation of national communications. Thematic training materials have also been developed and been used at these training workshops. National experts have been using these materials for the preparation of national communications.

For more information on CGE activities, go to:
http://unfccc.int/national_reports/non-annex_i_natcom/cge/items/2608.php

To download the CGE training materials, go to:
http://unfccc.int/resource/cd_roms/na1/start.htm

1.2.3 The National Communication Support Programme

The National Communication Support Programme (NCSP) is a UNDP/UNEP project, funded by the GEF, which provides technical and policy support to non-Annex I Parties for the preparation of national communications. The NCSP is based at the UNDP office in New York. The Swiss and US governments have co-sponsored NCSP activities.

Over its lifetime (2005-2010), the NCSP will sustain capacity-building efforts through technical and policy support, knowledge management, and communications and outreach. The programme will provide an integrated package of technical and policy support to enhance capacity in non-Annex I countries and to better meet the needs of countries, such as targeted, in-depth and issue-specific workshops and technical backstopping. The NCSP will also promote the quality and comprehensiveness of national communications, and timeliness of their submission, and assist non-Annex I Parties to better incorporate climate change into national development policies.

For more information on the NCSP, go to:
http://ncsp.undp.org

1.2.4 The United Nations Institute for Training and Research

Through the **Climate Change Capacity Development** (C3D) project, UNITAR has been enhancing the capacity of three regional centres of excellence to assist non-Annex I countries and improve their participation in UNFCCC processes and implementation. The centres: Environnement et Développement du Tiers Monde in Sénégal; The Energy Research Centre at the University of Cape Town in South Africa; and the Munasinghe Institute for Development in Sri Lanka have also developed a number of training modules for various aspects of climate change.

For more information on C3D, go to:
http://unitar-ccp.web.cern.ch/unitar-ccp/

1.2.5 Bilateral programmes

Several Annex I countries provide bilateral funding to non-Annex I Parties for specific climate change projects.

United Kingdom (UK)

The UK currently funds application of a regional climate model, Providing REgional Climates for Impact Studies (PRECIS). Other work includes the development of new approaches to vulnerability assessment and adaptation, and building capacity through promotion of the transfer of methodologies and approaches from the UK. The UK has also contributed to bilateral and multilateral programmes (e.g., see *Section 1.2.6*, vulnerability and adaptation).

Switzerland

Switzerland works with international research partners to develop strategies and proposals in the area of the global environment, particularly climate protection, protection of the ozone layer, and sustainable management of natural resources and energy. The transfer of knowledge and sustainable technologies in developing and transition countries is also supported and coordinated. Some of the activities undertaken include technical assistance to the UNDP-GEF regional Project, "Capacity Building for Improving the Quality of Greenhouse Gas Inventories (Europe/CIS region)", Clean Development Mechanism and solid waste management activities in China, and clean technology promotion in India. Work has also been carried out in Cuba, Senegal, Uganda and the Philippines.

The Netherlands

Thirteen countries – Bolivia, Colombia, Ghana, Mali, Mongolia, Senegal, Suriname, Yemen, Vietnam, Tanzania, Mozambique, Bangladesh and Guatemala – have participated in the Netherlands Climate Assistance Programme (NCAP). The NCAP assisted these countries to prepare, formulate, implement and evaluate their policies in relation to climate change; raise national awareness on the problem of climate change; promote exchange of experiences; and increase the involvement of policy-makers, scientists, and "broad layers" of the population in the climate change debate in developing countries.

Canada

Canada established the $100 million Canada Climate Change Development Fund (CCCDF) in 2000 to promote activities addressing the causes and effects of climate change in developing countries, while helping to reduce poverty and promote sustainable development. Originally a five-year fund, the CCCDF was extended to 2005-06. As of 2005, the CCCDF had supported projects in over 50 countries, in addition to making a $10 million contribution to the Least Developed Countries Fund (LDCF), managed by the United Nations and the GEF, which supports NAPAs.

United States (US)

Through the US Agency for International Development (US-AID), the US has developed a number of agreements with developing country partners to pursue research on global climate change and deploy climate observation systems, collaborate on energy and sequestration technologies, and explore methodologies for monitoring and measuring GHG emissions. US-AID has engaged in partnerships with Brazil, Central America, India, Mexico, Russia and South Africa.

For more information on these programmes, go to:

- United Kingdom: *http://www.defra.gov.uk/environment/climatechange/internat/devcountry/index.htm; http://www.precis.org.uk*
- Switzerland: *http://www.infras.ch*
- The Netherlands: *http://www.nlcap.net*
- Canada: *http://www.acdi-cida.gc.ca/CIDAWEB/acdicida.nsf/En/JUD-4189500-J8U*
- United States: *http://www.usaid.gov/our_work/environment/climate/index.html*

1.2.6 Global and regional projects

A number of regional and global projects are currently under implementation that could provide valuable lessons learned and good practices for non-Annex I Parties as they prepare their national communications.

National greenhouse gas inventories

The UNDP developed two capacity building projects to improve greenhouse gas inventories in two regions: Europe and the Commonwealth of Independent States and West and Central Africa. These projects built upon the expertise gained through the preparation of the Initial National Communications and aim to strengthen institutional capacity to prepare inventories as well as establish trained, sustainable national inventory teams. US-AID/EPA has run a similar capacity building project for Central America. The Central American and European projects were recently completed. They have generated valuable national experiences and documents that can be downloaded from the project websites. The African project is expected to be completed by mid-2008.

Additional resources

- Capacity Building for Improving GHG Inventories in Europe/CIS: *http://www.rec.org/REC/Programs/UNDP-GHGInventories/Default.html*
- US-AID: *http://www.usaid.gov/our_work/environment/climate/index.html*

Vulnerability and adaptation

The GEF funded a global initiative, **Assessments of Impacts and Adaptations to Climate Change** (AIACC), to advance scientific understanding of climate change vulnerabilities and adaptation options in developing countries. The programme was developed in collaboration with the UNEP/WMO Intergovernmental Panel on Climate Change (IPCC). AIACC was implemented by UNEP and executed jointly by START and the Third World Academy of Sciences (TWAS). Under AIACC, 20 regional studies were funded, and more than 100 scientists from 25 developing countries participated in the studies. The project concluded in 2004.

As a follow-up to the AIACC programme, a new project, Advancing Capacity to Support Climate Change Adaptation (ACCCA), has been funded by the European Commission and the UK Department of Environment, Food and Rural Affairs. It aims to bring together stakeholders and scientific communities in Asia and Africa to enable and support effective adaptation decisions that also promote sustainable development. The project began in late 2005.

The UNDP is implementing a capacity building project, **Stage II Adaptation for Central America, Mexico and Cuba**, funded by the GEF. The objective is to prepare national adaptation strategies for selected priority sectors that can be integrated into sustainable development plans in participating countries. This project will conclude in March 2007.

In the Caribbean, the World Bank supported a four-year (2004-2007), GEF-funded project, **Mainstreaming Adaptation to Climate Change in National Development Planning** (MACC), which aimed to integrate climate change and variability into the agendas of the tourism, agriculture, fisheries and infrastructure sectors.

Additional resources

For more information on these projects, go to:

- Assessments of Impacts and Adaptations to Climate Change (AIACC): *http://www.aiaccproject.org*
- Advancing Capacity to Support Climate Change Adaptation: *http://www.acccaproject.org*
- Capacity Building for Stage II Adaptation (Central America, Mexico and Cuba): *http://www.adaptacion.org*
- Mainstreaming Adaptation to Climate Change in National Development Planning (Caribbean): *http://www.oas.org/macc/*

1.3 Elements of a National Communication

1.3.1 Main thematic components

There are six key components of a national communication: 1) national circumstances; 2) the national greenhouse gas inventory; 3) programmes containing measures to facilitate adequate adaptation to climate change; 4) programmes containing measures to mitigate climate change; 5) other information considered relevant to the achievement of the objectives of the convention; and 6) constraints and gaps, and related financial, technical and capacity building needs.

The NCSP Initiation Workshop in Support of the Preparation of Second National Communications from non-Annex I Parties (NCSP, October 2005) identified it was of critical importance that developing countries have an appropriate implementation strategy for the various components. Aspects of such a strategy could include:

- Technical elements and reporting obligations under each component of the national communication;
- Strategies to incorporate priorities identified in the stocktaking exercise and stakeholder consultations;
- Plans to address data gaps and resource allocations for the improvement of data collection, in response to identified priorities and needs;
- Information on methodologies and tools available for carrying out the technical studies;
- Mechanisms to ensure adequate and effective technical assistance;
- Linkages between the Second National Communication process and national development priorities;
- Appropriate measurement of the impacts of the Second National Communication process; and
- Enhanced institutional arrangements to create a sustainable national communication process.

Table 1 provides examples of possible indicators and outputs of a national communication. Please note the table is meant as a guide to help countries identify and agree, in consultation with national teams and relevant stakeholders, the possible indicators and outputs that can be used to monitor the national communication – countries should select their own indicators, as appropriate. The table could also be used as a checklist of the products to be achieved under the different components of the national communication.

Table 1: Example of indicators and outputs for the national communication processs

Components	Indicators	Outputs/Products
National Circumstances	• Clear linkage between national circumstances information and climate change issues at the national level	Relevant information provided on the socio-economic and environmental conditions that provide an overall understanding of climate change concerns in the context of national development priorities. These include, among others: • Geographical characteristics, including climate, forests, land use and other environmental characteristics; • Population, including growth rate, distribution, density and other key statistics; • Economy, including energy, transport, industry, mining, tourism, agriculture, fisheries, waste and health; • Education, including scientific and technical research institutions; • Any information considered relevant by the Party, e.g. information relating to Articles 4.8, 4.9 and 4.10 of the Convention.
	• Development of institutional structure to sustain the national communication process	• Roster of institutions involved in the preparation of the national communication; • Terms of reference for the various committees, task groups and/or expert/thematic working groups involved in the preparation of the national communication.
National greenhouse gas (GHG) inventory	• Formulation of arrangements to collect and manage data for continuous inventory preparation	• Establishment of thematic working group on GHG inventory; • Key source analysis; • Database for inventory updates; • Updated, improved, and user-friendly GHG inventory database; • Updated GHG report, including technical annexes with the inventory procedures, calculations and sectoral tables/worksheets; • Inventory system, including institutional arrangements for a sustainable inventory process; • Strengthened human, scientific, technical and institutional capacity to undertake a GHG inventory.
	• Formulation of procedures for managing uncertainties in inventory data and GHG emission calculations	• Validation of inventories through QA/QC measures; • Identification of constraints and gaps of the GHG inventory; • Peer review process established.
Programmes containing measures to facilitate adequate adaptation to climate change	• Completion of vulnerability assessments for priority systems, sectors or regions	• Description of approaches, methodologies and tools used, including scenarios for the assessment of impacts of, and vulnerability and adaptation to, climate change; • Reports on vulnerability and impacts assessments; • Summary of meeting proceedings, and improved awareness of vulnerability and adaptation issues; • Training on the use and development of sector-appropriate methodologies relevant for decision-making; • Impacts of climate change on key vulnerable sectors/areas, including a description of the uncertainties.
	• Identification of adaptation strategies and measures	• Strategies and measures for adapting to climate change, in priority systems, sectors or regions; • Evaluation of adaptation measures in terms of costs, practicability, environmental and cultural appropriateness; • General policies that have implications for adaptation; • General capacity-building and institutional strengthening; • Public awareness, education and information provision.
	• Formulation of policy frameworks for developing and implementing adaptation strategies	• Priority adaptation needs and concerns; • Barriers to adaptation, including legal arrangements, institutional management, financial and technological constraints; • Opportunities for adaptation, including policies and measures; • Description of overall institutional arrangements for the implementation of adaptation priorities.

Continued overleaf …

Components	Indicators	Outputs/Products
Programmes containing measures to mitigate climate change	• Completion of climate change mitigation analysis	• Baseline and mitigation scenarios and projections; • Identification of mitigation options related to the most important future sources and sinks sectors; • Screening of mitigation options; • Assessment of reduction potential and cost of mitigation; • Integration of GHG reductions and costs across measures and sectors, through construction of GHG mitigation marginal cost curves; • Barriers and opportunities for mitigation; • Programmes and measures implemented or planned.
	• Formulation of policy frameworks for implementing mitigation measures	• Strategy to integrate mitigation measures into national development priorities; • Strengthened capacity for mitigation assessment (human/scientific/technical/institutional); • Institutional co-ordination for monitoring mitigation priorities identified; • Training and capacity building for national experts; • Preparation of mitigation projects for funding.
Other information considered relevant to the achievement of the objectives of the Convention	• Steps taken to integrate climate change considerations into national development and policy formulation	• Linkages between the national communication process and national development priorities; • Efforts to integrate climate change considerations into social, economic and environmental policies and actions; • Enhanced institutional arrangements to create a sustainable national communication process; • Indicators to evaluate the impacts of the national communication process at different levels.
	• Activities related to transfer of environmentally sustainable technologies	• Technology needs assessment; • Database established on environmentally sustainable technologies; • Technology information networks established; • Human, scientific, technical and institutional capacity strengthened.
	• Information on climate change research and systematic observation	• Measures and recommendations to improve national programmes for research and systematic observation; • Activities related to participation in global research and observation systems; • Identification of needs and priorities for climate change research and systematic observations.
	• Information on climate change education, training, and public awareness	• Initiatives to increase awareness and understanding of climate change issues; • Initiatives and programmes for education, training and public awareness; • Institutional framework for public participation in climate change activities; • Co-operation to promote education, training and public awareness; • Gaps, needs and priorities identified in climate change education, training and public awareness.
	• Information on capacity building activities, options and priorities	• Identification of specific needs, options and priorities for capacity building to address climate change issues; • Participation of wide range of stakeholders in issues related to climate change; • Activities related to co-ordination and sustainability of capacity-building activities; • Dissemination and sharing of information on capacity-building activities; • Capacity-building activities aimed at integrating adaptation into medium- and long-term planning; • Promotion of synergy in implementation of the Rio Conventions
	• Measures to promote information exchange and networking	• Activities to promote information sharing; • Participation in, and contribution to, information networks.
Constraints and gaps, and related financial, technical and capacity needs	• Further elaboration on the specific constraints, gaps and needs that have been identified in the preparation of the national communication	• Information on financial and technical resources provided for the preparation of national communications; • Proposed projects for financing; • Information on opportunities to implement adaptation measures; • Information on gaps and needs for technology transfer; • Additional needs for capacity building activities.

Source: *Elaborated by NCSP, based upon UNFCCC User Manual for the Guidelines on National Communications from non-Annex I Parties*

1.3.2 Policy context

Under most Initial National Communication projects, the production of the national communication document was considered the end point of the process. Countries were unable to use the national communication as an entry point into the development process. The Second National Communication represents an opportunity to transform the process from merely reporting to development of a strategic and policy-support tool. The national communication team must guide this transition, however the NCSP can assist in the process.

The Second National Communication can be a vehicle to facilitate:
- Institutionalisation of climate change responses;
- Production of knowledge and information on the basis of national priorities;
- Effective policy dialogue; and
- Public education and awareness for mainstreaming climate change concerns at different levels in society.

Institutionalisation of climate change responses

One of the best ways to ensure sustainability of the national communication outputs is to institutionalise the process so that climate change responses are mainstreamed into the government agenda. National teams can begin this institutionalisation process by making one objective of the Second National Communication to seek to facilitate policy dialogue and policy changes. Teams should also ensure that the outcomes of the Second National Communication process highlight short- and long-term policy strategies.

Production of policy-relevant knowledge and information

Institutionalisation of climate change responses can be a key objective of the Second National Communication. National teams may want to revisit the existing scope of the national communication and ensure that the outputs focus on national priorities and are linked to development planning.

Some key considerations might include:
- Providing terms of reference that specifically address policy-relevant issues in the different components of the Second National Communication;
- Emphasising socio-economic assessments as a key element of mitigation and V&A assessments;
- Guiding technical teams to leverage the results of mitigation and V&A studies for project formulation and implementation (see Box 1); and
- Promoting policy-oriented studies that expand on the traditional technical assessments.

Producing policy-relevant outputs does not necessarily mean the team has to undertake complex studies or develop scenarios – a simpler approach with lower uncertainties could be of more interest to policy-makers. Therefore, consider strategies to address data gaps and strengthen technical and institutional capacities and always select the methods/tools that are most appropriate to the research questions, data requirements and available technical expertise.

Effective policy dialogue

Ensuring the policy relevance of the national communication outputs is the first step in ensuring an effective policy dialogue, but the national team must also establish a system from the outset to undertake policy dialogues and pursue political buy-in. This includes assessing institutional arrangements to identify how best to engage stakeholders in linking climate change concerns to sectoral or national planning and creating a framework for assessing how linkages can be monitored and measured in the short and long terms

Box 1: Using V&A assessments to identify projects

The Second National Communication stocktaking exercise can be used to identify priority areas – or "hot spots" – that become the focus of V&A studies. These same priorities should be used to formulate adaptation projects, based upon the background information and outputs generated from the V&A assessments.

Lessons learned from the Initial National Communications process include:
- The Second National Communication, its technical reports and national expertise should be used as sources of information and as part of the decision-making routine when formulating and identifying projects;
- Project selection should be consistent with the outputs and priorities identified in the Second National Communication process;
- For a more result-oriented Second National Communication, focus on solid technical analysis and those areas with the biggest needs in order to address short- and long-term policy-relevant issues and priorities;
- The Second National Communication, if used strategically, can be a tool for policy advocacy and mainstreaming, as well as for project development.

(e.g., through the development of practical indicators). See Box 2 for additional examples.

At the outset, the national teams must also consider how to translate the Second National Communication into national strategies, including policies, programmes and projects and, in particular, what strategy will be used to link outputs of V&A and mitigation analyses to national/sectoral development planning.

A communications strategy should also be put in place to communicate clearly and regularly on the Second National Communication process and results and to further facilitate the policy dialogue. Lessons learned from the Initial National Communications process include:

- Public awareness under the Second National Communication should target policy-relevant issues; and
- At least one national communication outcome should clearly deal with policy decisions on adopting appropriate short- and long-term measures.

Awareness-raising and climate change mainstreaming

As well as facilitating a policy dialogue, any communication strategy should also raise awareness among a broad range of stakeholders and educate the public. In addition, national teams should endeavour to maintain the engagement of key stakeholders throughout the national communication process and beyond in order to help create sustainability and momentum of the process beyond the reporting phase.

From the outset, the national team should involve and seek inputs from relevant government institutions in the Second National Communication process, building upon the consultations initiated during the stocktaking phase. It is recommended that the stakeholder engagement process be documented, including any follow-up needed to maintain adequate involvement. Finally, the national team should develop a strategy for results appropriation, with specific actions to facilitate adoption and continuation of the Second National Communication process.

Countries will obtain the greatest value from the national communication process if they can build upon the results of the Initial National Communication and link the findings of their Second National Communication to national development planning. The inter-linkages of this process are outlined in Figure 1.

Box 2: Linking National Communication Outputs to Development Planning

Adaptation

Lessons learned from countries that have already begun to link adaptation into development planning include:

At the policy level:

- Use existing platforms (i.e., Poverty Reduction Strategy Papers, Millennium Development Goals, national development plans) and strategies to integrate climate change adaptation into development;
- Climate proof development at the national and sectoral level.

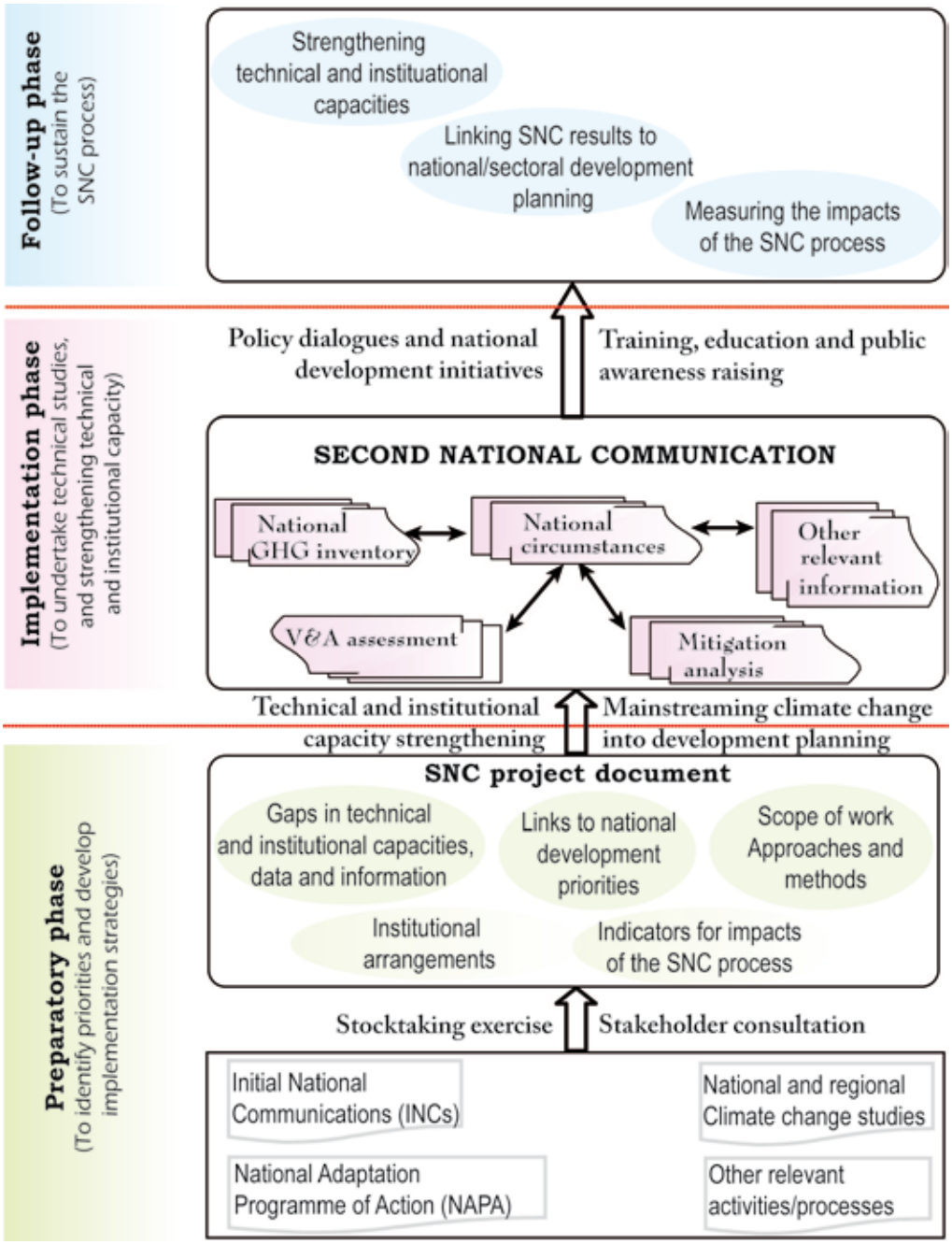
At the project level:

- Bring climate change adaptation concerns into the design of projects in areas vulnerable to climate change (e.g., agriculture, water, health)
- Design specific adaptation projects to supported by Special Climate Change Fund, Least Developed Country Fund, GEF Strategic Priority on Adaptation).

Mitigation

The most attractive mitigation options are typically those that also meet a country's sustainable development objectives, such as the Millennium Development Goals. Involving key stakeholders in the mitigation analysis is crucial to ensuring that the options identified also link to development priorities and are policy-relevant.

Figure 1: The building blocks of the national communication process



2 PLANNING THE NATIONAL COMMUNICATION PROJECT

2.1 Preparation of Workplan, Timeline and Budget

2.1.1 Workplan and timeline

As part of the planning phase, project co-ordinators must decide upon the outputs of the enabling activity and the content of each output. Outputs might include internal guidance documents for the project teams, archived electronic files, technical reports, policy briefs, the national communication itself and awareness-raising materials.

Once all outputs are identified, the project co-ordinator can create the project timeline. It is useful to work back from the planned date of submission of the national communication and incorporate all the major project milestones. Potential bottlenecks or timing conflicts – such as a mitigation study beginning before inventory data has been finalised – should be noted and contingency plans made.

Time should be built into the schedule for establishing legal arrangements with other institutions (e.g., data collection arrangements), for responding to issues raised during peer or government reviews, for training and for contingencies such as delays before the release of funds or certain data. If results are to be disseminated to a broad audience, this can also be factored into the timeline.

The workplan and timeline should ideally be developed by the project co-ordinator, possibly in conjunction with the thematic team leaders. It is recommended that this group meet periodically to review and discuss progress and to flag any issues or delays that could affect the overall schedule. Workplan and timelines may be adjusted on an annual basis during the lifetime of project (typically three years) in order to accommodate any delays and/or faster-than-anticipated progress or to address unforeseen changes in project implementation (e.g., adjustments in implementation strategy, changes in project teams, institutions to be involved, etc.)

2.1.2 Budget

Although specific budget guidance for implementing the national communication is beyond the scope of this resource kit, it can be assumed that labour will be a significant cost. Project co-ordinators may therefore find it useful to prepare a staff matrix that defines person-hours or person-days by expert and task. Additionally, project co-ordinators will need to budget for training, research and data collection, reporting, translation and archiving. Although not required under the UNFCCC, non-Annex I Parties may want to consider preparing stand-alone national inventory, V&A assessment, or mitigation options reports and other thematic documents or awareness-raising materials for public dissemination and education. If so, funds should be set aside for the preparation, printing and distribution of these documents. Budget revisions are usually expected on an annual basis. These revisions represent opportunities to make necessary adjustments to the budget lines, in co-ordination with the Executing and Implementing Agencies.

2.2 The Project Inception Workshop

Once funding is obtained for the Second National Communication, one of the first activities is to hold a project inception workshop. The objective of the workshop is to refine the institutional and other necessary arrangements for carrying out the enabling activity project. Figure 2 provides an example of the institutional arrangements that are typically found for the national communication process.

The workshop should be held soon after the enabling activity commences, but ideally once the core project team has been identified and recruited.

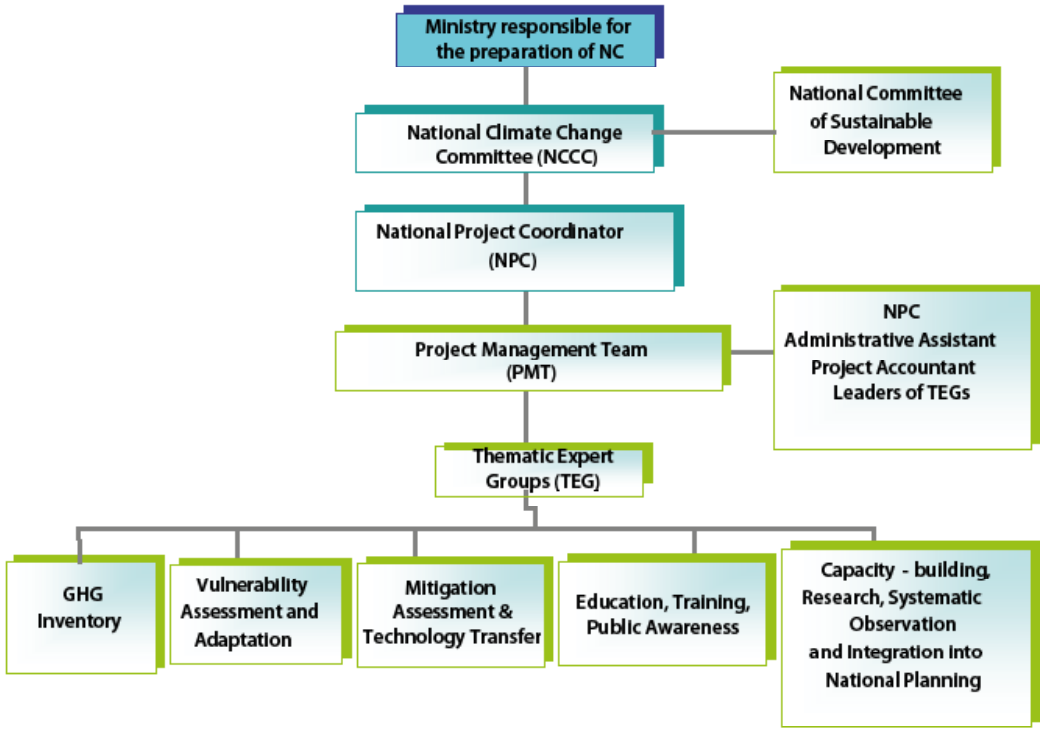
The objectives of the workshop might include:

- presentation of the project's objectives and linkages/ synergies to other ongoing or planned projects, activities and initiatives, and national/sectoral development strategies;
- identification of stakeholders to be involved in the preparation of the national communication, e.g., governmental, private sector, donors, NGOs, academia;
- discussion of awareness-raising activities;
- clarification of the implementation modalities of the project; and
- review of the draft work plan and terms of reference for major subcontracts.

As well as inviting all institutions that will be involved in the project implementation, participation should be encouraged from those stakeholders with whom collaboration will be sought to ensure their buy-in to the process. If potential partners are unaware of climate change issues, it may be useful to brief them in advance of the workshop. Countries could also invite a representative of the Implementing Agency.

As a follow-up to the inception workshop, the project co-ordinator can finalise the workplan and begin with the sub-contracting and hiring processes.

Figure 2: Example of the instutional arrangements for the national communication process



2.3 Establishing systems and processes

2.3.1 The National Climate Change Committee (NCCC)

Most countries will have established a National Climate Change Committee shortly after ratification of the UNFCCC or as an oversight mechanism during the implementation of their enabling activity project for the Initial National Communication. The National Climate Change Committee is normally chaired by a senior civil servant from a ministry or department that the government has nominated as the UNFCCC Focal Point. It is inadvisable for the project co-ordinator to be the chairperson of the NCCC.

The key role of the Committee is to ensure climate change policies and programmes that emerge from the Second National Communication are consistent with national development objectives. The role of the project co-ordinator is to brief members of the National Climate Change Committee on the progress of the national communication project and to obtain feedback and guidance at appropriate intervals. The National Climate Change Committee is also charged with reviewing and approving the final draft of the national communication before obtaining ministerial approval.

For the Second National Communication, countries might wish to consider expanding the representation on the National Climate Change Committee to include, for example, members from the private sector, NGOs or additional government ministries. Synergies between the Rio Conventions that were considered under the GEF-funded National Capacity Self-Assessments may also play a part in identifying new climate change committee members.

The GEF National Dialogue Initiative (2005) found the national co-ordination mechanisms that have worked well have been those hosted by senior, influential ministries and initiated by focal points who were committed, dynamic and well-informed government officials. In addition, effective co-ordination mechanisms need to be backed by national political will and commitment to addressing global environ-

mental issues or national environmental issues. The biggest challenge for many project teams is ensuring the appropriate level of seniority on the National Climate Change Committee to ensure climate change can be mainstreamed into the broader development agenda.

For more on the composition and responsibilities of the Committee, see the Appendix.

2.3.2 Rules of procedure for the project team

Braatz and Doorn (2004) identified rules of procedure for inventory teams, many of which apply equally to any team implementing technical components of the national communication. These rules of procedure should be defined and distributed to the technical team prior to starting work. This will help to ensure consistency across source or thematic categories and can contribute to the team's overall efficiency. The rules of procedure should contain guidelines on:

- **Documentation and spreadsheet management.** The rules will include requirements for referencing data sources in spreadsheets, dating files, version control of files (e.g., who will distribute the files, how to name files so there is no confusion about which version is the most current, who will collect revised files, etc), and maintaining paper copies of references for archiving. This is especially useful where staff change from one national communication to the next and a number of years may elapse between – accurate and detailed documentation must be maintained to ensure consistency across studies and will improve the overall efficiency.

- **Report write-ups:** Any reporting for the national communication should aim to be consistent across source categories and thematic areas. To achieve this, teams need guidelines on the structure and content of their write-ups (i.e., an outline or description of what should be contained in each section, style guidelines, etc) and on formatting (e.g., format for each level of heading, procedures for use of common acronyms and units, reference format, table formats). In some cases, it may be most efficient to distribute templates to teams. Such guidance will avoid time-consuming and laborious harmonising of different formats and styles after report sections are written.

- **Quality assurance/quality control (QA/QC) plan:** It is recommended that QA/QC procedures include, at a minimum, routine internal review procedures (e.g., spot-checking spreadsheets for correct data entry, consistent formulas and complete documentation) and at least one round of external peer review. The plan should state the minimum levels of QC that should be met, as well as recommendations for more rigorous QC if sufficient resources are available. The plan should also include a schedule for QA procedures, lay out internal responsibilities (e.g., who will distribute materials for external review and will collect, disseminate and respond to review comments), contain a list of external reviewers and include instructions for incorporating and tracking revisions based on comments received. External reviewers can be national experts, as long as they weren't involved in the preparation of the national communication. Technical review by experts from neighbouring countries is also useful.

- **Archiving:** Preparation of a national communication requires the collection, generation, manipulation and storage of large amounts of information. The information is generated by a team of people that is likely to change within and between communications. Therefore, a rigorous system for storing this information is necessary for ensuring sustainability of the national communication process. The rules of procedure should contain requirements on what needs to be archived (both electronic and paper records), due dates for delivery and specific formatting or notational instructions.

For more on the responsibilities of the project co-ordinator, technical expert groups and consultants, see the Appendix .

2.3.3 Legal and collaborative arrangements

It is important to identify the various institutions that are the repositories of data that is needed to prepare the national studies. In cases where the information is not publicly available, legal and/or less formal collaboration arrangements may need to be established with the institutions so the data can be obtained in a timely manner and in the format required. Collaborative arrangements may also be agreed to share staff for national studies.

Such institutions include national government entities (e.g., statistical offices, government ministries), regional and international organisations (e.g., Food and Agriculture Organization, International Energy Agency), research institutions and private industry. The project co-ordinator should consider the need for meetings with key institutions to make necessary arrangements.

It is recommended that some form of written agreement

(e.g., letter of understanding, letter of intent or a formal agreement) be established between the entity implementing the national communication and institutions that hold the most critical data sets (and/or from whom staff will be utilised). Data confidentiality issues may need to be considered during this process, especially when data are to be obtained from industry. Systems will need to be established to ensure data confidentiality where needed.

During the process of identifying these institutions, possible candidates for QA/QC roles should be identified. As meetings are held with these groups, it is also recommended to inform them of the overall schedule of the national communication and to encourage them to assist in the process by acting as expert reviewers.

2.3.4 Monitoring and evaluation

All GEF climate change enabling activities are subject to monitoring and evaluation procedures, namely:

1. **The Annual Performance Review (APR), for which the project team:**
- Provides self-assessment report;
- Rates progress towards achieving project objectives and implementation progress.

2. (For UNDP implemented projects) **The Annual Tri-Partite Review (TPR), for which the project team:**
- Participates in TPR meeting;
- Reviews and clears TPR report.

3. A final project evaluation, for which the project team:
- Drafts TORs for the evaluation team according to the "GEF Guidelines to Implementing Agencies to conduct Terminal Evaluations" and "Guidelines for Developing TORs for Final Evaluations";
- Reviews evaluation report.

For more guidance on monitoring and evaluation, go to: *http://www.undp.org/gef/05/monitoring/index.html*

Quarterly reports

Quarterly reports are an essential part of the national communication process that allow the Implementing Agency to be assured that project teams are equipped to undertake their projects, that funds are being made available in a timely manner and used appropriately, and that the project is progressing towards its planned outputs and outcomes. The report is not just a requirement of the Implementing Agency; it is also a requirement of the GEF. The report will comprise of some or all of the following:

1. Progress report
   a) What we've achieved in the last 3 months
   b) What we plan to do in the next 3 months
2. Expenditure
3. Inventory of purchased items (if applicable)
4. Planned expenditure
5. Cash advance request

As part of the progress report, information could be included on who has been employed, activities undertaken and outputs produced. It is advisable to include a table of project staff and consultants and reports and participant lists of any meetings held. A brief workplan should be included as part of the plan for the next quarter, along with any problems that have been encountered and needs for assistance.

Before submitting the report, review for consistency and ensure that the progress report justifies the expenditure. For example, if the expenditure report shows the purchase of major expensive equipment, is it listed in the inventory? Also ensure that the planned expenditure matches the proposed work plan and the cash advance request.

2.3.5 Knowledge capture and lessons learned

Closely related to monitoring and evaluation is the capture of knowledge and lessons learned from the enabling activity project. The value of this process is for teams to leverage lessons from past and ongoing projects and to replicate successes, which are fundamental aspects of any GEF project.

The project co-ordinator should outline the mechanisms for capturing impacts and lessons learned during the planning phase of the enabling activity. The mechanisms could range from participant evaluations at national training workshops to quarterly reviews of the enabling activity project for GEF monitoring purposes. The objective of the exercise is to document detailed technical guidance, consolidate project learning and to mainstream climate change concerns into national development agenda.

3 IMPLEMENTING THE NATIONAL COMMUNICATION PROJECT: THE GREENHOUSE GAS INVENTORY

Under Decision 17/CP.8, for the Second National Communication, non-Annex I Parties shall estimate national GHG inventories for 2000. Least developed country Parties may estimate their national GHG inventories for years at their discretion. Non-Annex I Parties provide estimates of the anthropogenic emissions of carbon dioxide (CO_2), methane (CH_4) and nitrous oxide (N_2O) by sources and removals by sinks, and are encouraged to report HFCs, PFCs and SF_6. The national communication should include the inventory sectoral tables and worksheets of the IPCC, in both electronic and hard copy format.

3.1 Why compile a GHG inventory?

In addition to meeting reporting obligations, the GHG inventory provides the foundation of mitigation. The inventory can also provide information that is useful for addressing other environmental issues, identifying climate change and socio-economic trends and national development planning. Resource management decisions can also benefit from GHG inventory data.

3.2 Key steps in compiling a GHG inventory

Compiling a national GHG inventory requires fundamental decisions about data and methods and a system for data management, quality assurance/quality control, documentation and archiving. The process can be considered to have three key phases:

1. Planning
2. Preparation
3. Reporting, archiving and documentation

As guidance exists on all of these aspects (see *Section 3.3,* Methods and Tools), the phases are only briefly elaborated below.

1 Planning the GHG inventory

Inventory development can be a resource-intensive enterprise, therefore it is essential to plan wisely and prioritise tasks, focusing on key sources. A key source is one prioritised within the national inventory system because its estimate has a significant influence on a country's total inventory of direct GHGs in terms of the absolute level of emissions, the trend in emissions, or both (IPCC 2000, 2003).

There are two components to the planning process – planning the overall preparation of the GHG inventory and planning for individual sources, which will lead to three outputs: a detailed workplan, overall inventory preparation instructions and source-specific preparation instructions. The instructions are essentially "rules of procedure" for compiling the inventory, and explain various aspects of the inventory preparation process, such as file management, reporting instructions; internal deadlines; research guidance; and data-sharing procedures. Ideally, the instructions should be detailed enough so that any outside expert could come in and understand how to prepare the national GHG inventory. This detailed documentation can be one of the most important contributors to inventory sustainability in non-Annex I Parties.

One of the most critical decisions made during the planning phase is the appointment of the "National Entity", responsible for the GHG inventory, and the "Inventory Co-ordinator", who manages the activities. Ideally, the national entity should have significant technical expertise and a legal mandate. The inventory coordinator should possess technical and managerial skills, and ideally have formal government authority.

Preparation checklist

- ☑ **Review previous inventory: What are the major gaps? How can it be improved?**
- ☑ **Broadly review GHG inventories from countries of similar circumstances.**
- ☑ **Review organisational chart: Did it work? Was it sustained? Has technical capacity migrated?**
- ☑ **Identify other national efforts that may offer opportunities for cooperation and data sharing.**

2 Peparing the GHG inventory

Braatz and Doorn (2004) identified the following inventory preparation tasks:

1. Determine data availability and quality;
2. Determine methods and compile data;
3. Conduct emission calculations and complete text sections of inventory;
4. Complete Quality Assurance/Quality Control (QA/QC) procedures;
5. Complete uncertainty analysis;
6. Undertake key source analysis;
7. Complete reporting;
8. Complete documentation and archiving;
9. Undertake public dissemination of results; and
10. Complete inventory improvement strategy.

It is worth noting that the inventory team should undertake the key source analysis during the planning phase as a mechanism for prioritising work during the inventory compilation phase; the analysis is carried out again after the inventory has been prepared to review trends in the GHG inventory. These results can feed into the inventory improvement strategy, which outlines activities to be undertaken in future inventories to continue improving emission estimates and reducing uncertainties.

3 Reporting, archiving and documentation

Reporting, documentation and archiving have been identified as inventory preparation tasks by Braatz and Doorn, as these activities should be carried out as the inventory is compiled in order to capture and document all assumptions and all relevant decision making processes. These tasks are sufficiently important, however, to merit additional elaboration. Reporting, archiving and documentation captures the outputs of the preparation phase, namely the national GHG inventory and any other technical reports or documents that have been planned.

Guidance on the structure and content of all reporting should be explained in the rules of procedure – for example, an outline of each section, example of tables, style guidelines and formatting guidance for headings, use of acronyms and units and reference formats. This reduces the need for time-consuming harmonisation of different formats and styles. Nonetheless, it may be necessary to appoint an 'inventory compiler' to ensure a final, cohesive document. The national team should consider how the results will be disseminated – there may be targeted reports that can be prepared for planning purposes and decision-making, while a more general report serves a broader audience.

Archiving is the collection, generation, manipulation and storage of the large amounts of data generated during the inventory compilation. Rigorous systems for storing the data should be enforced to ensure sustainability of the inventory process. As the GHG inventory team may change over time, institutional arrangements should be clearly outlined for the archiving. This will facilitate inventory updates in the future.

One of the most important tasks within the GHG inventory is documenting the National Inventory System. A National Inventory System is a set of relations between people and institutions described in several documents to ensure: i) the sustainability of the inventory preparation in the country, ii) consistency of reported emissions, and iii) standard quality of results (Braatz and Doorn, 2004). In non-Annex I countries, where a greenhouse gas inventory may only be produced once every few years, a well-documented inventory system ensures that fewer resources will be spent "recreating the wheel" and instead the team will be able to focus on inventory improvements.

3.3 Methods and tools

The IPCC-National Greenhouse Gas Inventory Programme (NGGIP) Technical Support Unit provides guidance and tools to assist countries in preparing their national GHG inventories. These are the *Revised 1996 IPCC Guidelines for National Greenhouse Gas Inventories (Volumes 1 to 3 and software); Good Practice Guidance and Uncertainty Management in National Greenhouse Gas Inventories (2000)* and the *Good Practice Guidance for Land Use, Land-Use Change and Forestry (2003)*. Countries can download the materials from the NGGIP website, or request a CD-rom or published documents.

According to Decisions 17/CP.8 and 13/CP.9, non-Annex I Parties should use the Revised 1996 IPCC Guidelines for estimating and reporting their national GHG inventories. In addition, non-Annex I Parties are encouraged to apply the IPCC Good Practice Guidance to improve transparency, consistency, comparability, completeness and accuracy in their GHG inventories.

The Good Practice Guidance manuals contain new information regarding QA/QC, uncertainty assessments and emission factors, activity data and methods. Non-Annex I parties must consider the feasibility of using the manuals because of the implications of the capacity required, data needs and resource allocation. However, non-Annex I Parties are encouraged, to the extent possible, to undertake any key source analysis as indicated in the IPCC GPG 2000 to assist in developing inventories that better reflect their national circumstances and to improve inventories in the most cost-effective manner. As noted earlier, key source analysis is a very useful method for identifying those emission categories of the inventory that require particular attention and is thus an important tool for more effective allocation of resources.

The NGGIP website also hosts a online Emission Factor Database. The default emission factors from the IPCC guidelines are contained in the searchable database. Countries can also submit local emission factors for inclusion in the database, if they pass a technical review.

These key resources and others are listed overleaf.

3.4 Integrating the GHG inventory with other thematic components

The GHG inventory should be closed linked to the other thematic components of the national communication. At a minimum, the data and assumptions used in the all three components should be consistent (e.g., demographic and economic assumptions) and reporting harmonised and closely co-ordinated.

The GHG inventory will identify major sources and sinks of GHGs, helping to determine the scope and emphasis of the mitigation assessment.

Resources: Methods and Tools

Available on the NGGIP website *(http://www.ipcc-nggip.iges.or.jp)* are:

- Revised 1996 IPCC Guidelines for National Greenhouse Gas Inventories
- IPCC Good Practice Guidance and Uncertainty Management in National Greenhouse Gas Inventories
- IPCC Good Practice Guidance for Land Use, Land-Use Change and Forestry

Available on the NCSP website *(http://ncsp.undp.org)* is:

- Braatz, B. and Doorn, M. (2004), Managing the National Greenhouse Gas Inventory Process, National Communications Support Unit Handbook, UNDP-GEF, New York, US (*http://ncsp.undp.org/report_detail.cfm?Projectid=153*)
- NCSP Knowledge Network on GHG Inventory (*http://www.ghgnetwork.org*)

Available on the UNFCCC website is:

- CGE training materials *(http://unfccc.int/resource/cd_roms/na1/start.htm)*

Project results from Capacity Building for Improving GHG Inventories (Europe and CIS region) are available at: *http://www.rec.org/REC/Programs/UNDP-GHGInventories/Default.html*

4 IMPLEMENTING THE NATIONAL COMMUNICATION PROJECT: THE MITIGATION ASSESSMENT

Under Decision 17/CP.8, non-Annex I Parties may provide information on programmes containing measures to mitigate climate change by addressing anthropogenic emission by sources and removals by sinks of all greenhouse gases not controlled by the Montreal Protocol (UNFCCC, 2002).

4.1 Why conduct a mitigation assessment?

First and foremost, undertaking mitigation assessments allows non-Annex I Parties to meet the principles and objectives of the UNFCCC – under Articles 4 and 12 of the Convention, all Parties are required to assess and develop national and, where appropriate, regional programmes and measures that will result in mitigation of human-induced climate change.

Although non-Annex I Parties are not required to take on emission reduction commitments, mitigation analysis provides policy-makers with a better understanding of the costs of avoiding climate disruption and allows potential projects, programmes and technologies to be identified, evaluated and prioritised. Undertaking climate change mitigation may also provide ancillary benefits that contribute to national development objectives. For example, mitigation projects can result in strengthened institutional and human capacity-building, while mitigation analysis can assist policy-makers in the prioritisation and evaluation of social, economic and environmental programmes and practices.

Finally, more accurate information allows for greater confidence in implementing the Convention and can contribute to improved awareness-raising efforts and national planning.

The Clean Development Mechanism

Any mitigation activity that results in real and measurable GHG emission reductions has the potential to become a project funded under the Clean Development Mechanism (CDM). It should be noted that the adoption of a policy or standard that results in climate change mitigation cannot be submitted as a CDM project – however, the activities by which that policy or standard is implemented can be considered CDM-eligible if they form part of a programme.

The GHG inventory may provide the greatest source of ideas for mitigation analysis; therefore a solid understanding of GHG inventory methodologies is crucial for identifying good CDM project concepts. CDM projects may be difficult to identify in certain key category areas, such as transport, and may, instead, stem from lower-emitting sectors, such as waste or afforestation/reforesation.

4.2 Key steps in the mitigation assessment

A mitigation assessment entails the national and/or regional analyses of the potential costs and impacts of various technologies and practices to mitigate climate change. The resulting information should be relevant for sustainable development and useful to policy-makers for helping formulate and prioritise mitigation programmes. There are four key steps to a mitigation assessment:

1 Scoping and preparation phase

The national mitigation team should consider what activity data needs to be collected, the number of sectors to be analysed, how key parameters such as base year and time horizon will be selected and how the analysis will be linked to the national greenhouse gas inventory and V&A assessments.

2 Develop baseline scenarios

Ideally, future trends of greenhouse gases should be captured as part of the scenario (countries may find the key source trend analysis of the national greenhouse gas inventory useful for this assessment). Most non-Annex I Parties continue to report issues with the quality of national activity data and data gaps. This means caution is required when interpreting the results of modelling outputs based on uncertain data.

3 Assess and prioritise mitigation options

This stage commonly involves an analysis of policy issues, macroeconomic assessments, costing of implementation of options, identification of policy instruments and detailing of technical assumptions. Mitigation priorities may be defined solely by the government, or in consultation with other stakeholders, such as NGOs, industries and the scientific community. Criteria that might be used to evaluate and prioritise mitigation options include: GHGs and other environmental considerations; economic and social considerations; and/or administrative, institutional and political considerations.

4 Construct mitigation scenarios and develop strategy

Mitigation scenarios explain how adopted mitigation options will affect future levels of GHGs. A mitigation strategy that encompasses these mitigation options is also developed. It is worth noting that mitigation analysis for the Second National Communication should build upon previous work. Therefore, in the preparation phase, consideration should be given to what needs to be accomplished in the context of previous achievements, while in the strategic development phase, note should be taken of any remaining priorities that need to be revisited in subsequent communications.

A great deal of technical guidance already exists on scenario development, prioritisation of mitigation options and preparation of mitigation strategies. Therefore, this resource kit will only elaborate on the scoping and preparation phase in *Section 4.2.1*. Integrating the mitigation assessments with the GHG inventory and V&A assessments under the national communication is discussed in *Section 4.2.2*. Tools and other resources are listed in *Section 4.2.3*.

4.2.1 Preparing for a mitigation assessment

The preparation phase should begin with a review of the mitigation section from the Initial National Communication. What are the areas for improvement? What are the gaps, uncertainties and strengths in the previous assessments?

Two factors can impact upon mitigation analyses and processes: data availability and the stakeholders. Thus, in the preparation phase, it is important to focus on these factors and how they will be addressed.

Specific data requirements will depend on scope and objectives of the mitigation studies to be undertaken. The availability of activity data will also affect model and/or methodology selection – some only require data to be collected for a base year while others require a time series. The primary focus for the national communication should be collation of secondary data. However, some primary data collection may be required and expert judgment may be needed to fill data gaps.

The development of mitigation assessments requires close co-operation among a wide range of stakeholders, and the project co-ordinator should seek to bring together experts and representatives from different sectors for the national mitigation team. The expert skills required include: statisticians, modelers, economists, engineers, policy experts and technical writers. Mitigation assessments are not simply technocratic exercises – they involve broad judgments about how mitigation activities can fit into national development priorities. Therefore, the energy, environment and finance ministries will all likely need to be involved.

Preparation checklist

- ☑ **Define time frame (typically long-term, e.g., 30-40 years)**
- ☑ **Define scope (e.g., energy demand and supply, agriculture, land-use change and forestry, solid waste, geological sequestration)**
- ☑ **Define participants and key stakeholders (e.g., policy-makers, scientific community, NGOs)**
- ☑ **Define desired results**
- ☑ **Select methodologies consistent with available data and expertise**
- ☑ **Standardise key parameters (e.g., base year, end year, discount rate)**
- ☑ **Define project boundaries (consistent with approach used to develop GHG inventory)**
- ☑ **Define scenarios to be developed (typically, at least two: baseline and mitigation)**

4.2.2 Integrating the mitigation assessment with other thematic components

Mitigation assessments should be closely linked to the other thematic components of the national communication. At a minimum, the data and assumptions used in the all three components should be consistent (e.g., demographic and economic assumptions) and the reporting harmonised.

The GHG inventory will identify major sources and sinks of GHGs, helping to determine the scope and emphasis of the mitigation assessment. Mitigation assessments should use inventory accounting procedures and emission factors wherever possible. V&A assessments may identify possible changes in natural resource conditions and management practices, which could affect resource conditions in the baseline scenario as well as the applicability of mitigation options. For example, climate change might reduce rainfall and affect hydro-energy generation potential and biomass productivity, thus altering the effectiveness of mitigation strategies such as hydro-power or reduction of agricultural emissions.

4.2.3 Methods and tools for mitigation analysis

Numerous methods and tools exist for use in mitigation assessments, ranging from a broad description of main development trends and statistics to formalised modelling at sectoral and macro-economic levels. Top-down models are most useful for studying broad macroeconomic and fiscal policies for mitigation, such as carbon or other environmental taxes, while bottom-up models are most useful for studying options that have specific sectoral and technological implications (CGE, 2005a).

Popular examples of these models include:

Top-down models

- MARKAL-MACRO (market allocation macro-economic model): an energy-economy-environment optimisation model (combined bottom-up and top-down);

- ENPEP (Energy and Power Evaluation Program); integrated approach for modelling energy system (partial bottom-up characteristics).

Bottom-up models

- STAIR (Services, Transport, Agriculture, Industry and Residential energy model) : flexible model for long-term mitigation scenarios;
- GACMO: Spreadsheet module for project-based mitigation analysis;
- COPATH (Carbon Pasture Agriculture Total Harvesting): spreadsheet model for the estimation of carbon flows associated with forest use;
- LEAP: (Long-range Energy Alternatives Planning system) end-use accounting modelling system for energy;
- ETO (Energy Technology Optimization): compares energy supply sources to identify the lowest cost option;
- EM (Environmental Manual for power development): tool for the inclusion of environmental and cost data into decision-making for energy projects, especially in developing countries.

Lessons learned about mitigation analysis tools

At a CGE mitigation training workshop for non-Annex I Parties held in Seoul, The Republic of Korea, in September 2005, non-Annex I participants noted several issues regarding mitigation analysis tools. These were:

- Models are tools aimed at helping plan future scenarios but they cannot predict what the future will be;
- The following should be considered when choosing the tools for mitigation:
  - What are the objectives in using the computer models?
  - What are the data requirements?
  - How can these tools be useful in addressing national development needs?
- Although computer models are important, the process of building the capacity of local experts is imperative in the exercise of mitigation assessments;
- At the outset of a modelling exercise, there should be a clear distinction between generating information from the models and the actual work in computer modelling.

4.3 Reporting on mitigation under the National Communication

Under Article 12 of the Convention, Parties may provide information on general descriptions of steps taken or envisaged for formulating, implementing, publishing and/or regularly updating national or regional programmes containing measures to mitigate climate change. Non-Annex I Parties are encouraged to provide, to the extent possible, information on programmes and measures planned or implemented that contribute to climate change mitigation by addressing emissions and removals.

Reporting could also include a description of the approach used to conduct the mitigation analysis (e.g. top-down or bottom-up) as well as the methods, models and tools. As well as outlining which technical resources were used, the report could explain how and to which sectors of the economy the resources were applied, the limitations of the resources and the data and/or information gaps.

Because the mitigation assessment may include a detailed evaluation of specific programmes and policies, the steps taken should be well elaborated and should include the description of:

- The social and economic development framework for climate change mitigation;
- The main national economic and social development trends, including expected GHG emissions for all sectors.

In reporting on programmes and measures, it is useful to concentrate on sector-specific measures that could facilitate mitigation of climate change. This information can be provided either within the National Communication or as a separate document and should form the basis from which mitigation projects are developed.

Reporting on mitigation projects

Information on any mitigation projects that are being implemented or proposed could include information on funding resources provided by multilateral and bilateral programmes. Information on mitigation projects should be based upon national circumstances and include:

- A description of the project concepts, which should include environmental and social benefits;
- An elaboration of the costs of implementation;
- A description of the mitigation potential;
- A description of the constraints to implementation.

Reporting on barriers to, and opportunities for, mitigation

Mitigation assessments should include information on the barriers to, and opportunities for, implementation. In this context, national teams might find it useful to identify the most necessary requirements for implementing mitigation options, such as: financial support; assessment of technologies for the different mitigation options; institutional capacity-building to sustain mitigation work; regulatory policies; and/

or improvements of the national decision-making framework.

Resources: Methods and Tools

UNFCCC CGE training materials:
http://unfccc.int/resource/cd_roms/na1/start.htm

UNEP Greenhouse Gas Abatement Costing Studies. Economics of Greenhouse Gas Limitations – Methodological Guidelines, 1998. Halsnaes, K.; Callaway, J.M.; Meyer, H.J. UCCEE, Denmark:
http://uneprisoe.org/EconomicsGHG

Greenhouse Gas Mitigation Assessment: A Guidebook, 1995, Jayant Sathaye and Stephen Meyers, Kluwer Academic Publishers, London, UK:*http://ies.lbl.gov/iespubs/iesgpubs.html*

Available on the IPCC website (*http://www.ipcc.ch)*:
- Climate Change 2001: Mitigation Contribution of Working Group III to the Third Assessment Report
- Special Report on Emissions Scenarios, 2000
- Special Report on Technology Transfer, 2000
- Special Report on Land Use, Land Use Change, and Forestry, 2000
- Technologies, Policies and Measures for Mitigating Climate Change – IPCC Technical Paper I, Nov. 1996

Models

- LEAP (Stockholm Environment Institute): *http://forums.seib.org/leap/*
- ENPEP (Argonne/IAEA): *http://www.dis.anl.gov/ceeesa/programs/enpepwin.html*
- COPATH (LBL): *http://www.lbl.gov*
- COMAP (LBL): *http://www.lbl.gov*
- EM (World Bank): *http://www.worldbank.org/html/fpd/em/model/em_model*
- MARKAL-MACRO (IEA/ETSAP): *http://www.etsap.org*
- RETscreen (Natural Resources Canada): *http://www.retscreen.net*
- GACMO (UNEP-Risoe): *http://www.uneprisoe.org*

5 IMPLEMENTING THE NATIONAL COMMUNICATION PROJECT: THE V&A ASSESSMENT

Under Decision 17/CP.8, non-Annex I countries shall provide information on their vulnerability to the adverse effects of climate change and on adaptation measures being taken to meet their specific needs and concerns arising from these adverse impacts. Specifically, non-Annex I Parties are encouraged to include a description of methodologies, tools and data used, including scenarios for the assessment of impacts of, and vulnerability and adaptation to, climate change, as well as any uncertainties associated with these methodologies (UNFCCC, 2002).

5.1 Why conduct a V&A assessment?

At an NCSP initiation workshop in support of Second National Communications from non-Annex I countries held in Tbilisi, Georgia, in October 2005, participants concluded that national adaptation strategies must be a key outcome of V&A assessments under Second National Communications in order to facilitate implementation of adaptation measures. This "dual purpose" of V&A assessments – to meet Convention reporting requirements and generate information for more effective national and/or sectoral adaptation decision-making – is becoming increasingly relevant as countries cope with highly variable climate and the resulting vulnerabilities.

V&A assessments should also serve as the primary basis for formulating adaptation projects to be supported by the various adaptation funds. If a country intends to use the V&A assessment for this purpose, attention should be paid in the planning phase to ensuring the outcomes provide sufficient information for the formulation of adaptation projects.

Adaptation funds

There are currently four different funds for supporting adaptation measures in non-Annex I countries: the Special Climate Change Fund (SCCF) and Least Developed Country Fund (LDCF) under the UNFCCC, the Adaptation Fund under the Kyoto Protocol and the Strategic Priority on Adaptation (SPA) of the Global Environment Facility. (See Box 3 for sources of information on the funds.)

To develop an adaptation project concept that leverages financing from one of these funds, a country must: identify national priorities; establish a case for adaptation; develop priorities for adaptation action; and elaborate the planning, implementation, monitoring and evaluation framework for the identified project with a range of stakeholders. In the context of Second National Communications, the national team should ensure the results of V&A assessments feed into the formulation of adaptation projects, if that is an agreed objective.

Box 3: Adaptation fund information sources

SCCF: *http://unfccc.int/cooperation_and_support/financial_mechanism/items/3657.php*
LDCF: *http://unfccc.int/cooperation_and_support/financial_mechanism/items/3660.php*
Adaptation Fund: *http://unfccc.int/cooperation_and_support/financial_mechanism/items/3659.php*
SPA: *http://thegef.org/Documents/Council_Documents/GEF_C27/documents/C.27.Inf.10OperationalGuidelinesforStrategicPriority.pdf*

The UNDP adaptation programming website also has a range of materials supporting project development: *http://www.undp.org/gef/adaptation/index.htm*

5.2 Key steps in the V&A assessment

V&A assessments are carried out to provide stakeholders with the necessary information to understand vulnerability to climate change and adaptation options. The CGE (2005b) notes that a V&A assessment, therefore, is not about applying a model; it is about supplying useful information to stakeholders – that is, models or other tools are necessary only to the extent that they help provide useful information.

The V&A assessment should seek to address several key questions:

- What impacts/vulnerability have been observed/experienced? And what are the underlying drivers? **(current vulnerability assessment)**
- What are the impacts and vulnerability under projected climate and socio-economic conditions? **(future vulnerability assessment)**
- What are the adaptive responses to reduce vulnerability? **(adaptation assessment)**
- What are the implications for sustainable development? **(policy recommendations)**

The UNDP *Adaptation Policy Framework* identifies four main steps for carrying out V&A assessments under Second National Communications in order to address these questions. They are:

1 Scope and design the V&A assessments

Adaptation is a cross-cutting issue, so during the scoping and design phase a range of key stakeholders should be identified to provide input on the sectoral, national and regional development priorities. Priority areas can be the most vulnerable sectors (e.g., agriculture, water, health) and/or geographic regions (e.g., a climate zone, watershed). Once the priorities and scope of the V&A assessments are decided, the national team should identify the most appropriate approaches, methods and tools for carrying out the assessments, according to the availability of data, capacity and resources.

2 Assess current vulnerability and adaptation

In this phase, the national team should analyse recent trends in the priority sector/system, as well as key climatic, socio-economic and institutional variables (e.g., population, land-use change). The factors contributing to current vulnerabilities should be analysed and the critical thresholds identified. Teams should also review existing adaptive policies and measures and assess their efficacy.

3 Characterise future climate risks

In order to assess future vulnerabilities, teams must characterise conditions of relevant climatic, socio-economic, sea level and other environmental variables (that is, develop scenarios), as well as the nature and scale of potential impacts. Opportunities for, and barriers to, adaptation of the priority sector/system should be assessed.

4 Develop an adaptation strategy

In the final phase, all the information is synthesised, and adaptation options are identified, evaluated and prioritised. From this base, adaptation strategies, policies and measures can be elaborated.

A variety of frameworks, methods and tools for V&A assessment are already available to countries. Therefore, this resource kit will only elaborate on the design phase in *Section 5.2.1*. Integrating the V&A assessments with the other thematic components of the National Communication is discussed in *Section 5.2.2* and linking to NAPAs in *Section 5.2.3*. Tools and resources are listed in *Section 5.2.4*.

5.2.1 Designing a V&A assessment

The first task of the national team should be to review the existing national V&A information, including the work undertaken during the Initial National Communication. What are the areas for improvement? What are the gaps, uncertainties and strengths in the previous assessments? How will the new analysis be linked to the national GHG inventory and mitigation assessment under the Second National Communication? If the country has undertaken a NAPA, how will this link to the adaptation strategy designed under the National Communication? Undertaking a thorough review of existing information and data, to avoid duplication of efforts and to ensure complementarity of the Second National Communication studies to existing initiatives, will help make the most of limited resources.

Adaptation options can be complex and cross-cutting, therefore it is critical to engage stakeholders in all major steps of the V&A assessment. In the planning phase, key stakeholders (e.g., policy-makers, resource managers, local authorities, community representatives, NGOs and academia) have a crucial role to play in helping to define priorities at the sectoral, national and/or regional level. It has also been found that it is easier to have policy-makers adopt the policy recommendations of V&A assessments for use in adaptation planning if the key stakeholders have a sense of ownership of the assessment process. Therefore, sufficient time needs to be dedicated to identifying the policy questions that need to be addressed by the V&A studies and thus ensure their policy relevance.

Examples of questions that could be asked of stakeholders include:

- What are the key vulnerabilities ("hot spots") within the country? (to determine where to focus adaptation efforts)
- What are the key characteristics of a national/sectoral adaptation strategy?
- What adaptation actions could be implemented to reduce vulnerability?

Experience has found that a strong stakeholder-led approach, using an integrated package of decision support tools, is a good practice for linking scientific assessment to adaptation planning and stakeholders can be motivated to become part of the research process if provided with research questions and inputs/insights.

There is no "one size fits all" approach to V&A assessments. Therefore, once the objectives and priorities of the V&A assessments have been identified, the national team should review the various methodological frameworks, methods and tools available, taking into account the differing technical complexities and requirements for data availability and quality, as well as the time and resources needed by each approach. The national team should also consider whether the selected approach will be appropriate in light of the policy context and objectives of the V&A assessments.

Finally, it is important that the national team consider how they will disseminate the results of the V&A assessments, to ensure that the studies serve their purpose. One of the lessons learned by many countries during the Initial National Communication process was that more awareness-raising is needed among stakeholders and countries need a strategy in place to disseminate and communicate the key findings of the V&A assessments.

Preparation checklist

The CGE (2005b) outlines a series of questions a country should consider before undertaking a V&A assessment:

- ☑ **What system/sector is of concern?**
- ☑ **Who may be affected?**
- ☑ **How far into the future is of concern?**
- ☑ **For what purpose is the V&A assessment to be used? (e.g. awareness raising, policy-making)**
- ☑ **What kind of output is needed?**
- ☑ **What resources are available? (This is a key question that will affect choice of the framework or model used.)**
- ☑ **How much time is available?**

Once these questions are addressed, a choice of approach or models can be made based in part on which ones best answer the questions being asked and can be used within the available data, expertise, time and resources.

5.2.2 Integrating the V&A assessment with other thematic components

The V&A assessments should be closely linked to the other thematic components of the National Communication. At a minimum, the data and assumptions used in all three components should be consistent (e.g., demographic and economic assumptions) and the reporting harmonised.

The GHG inventory will identify major sources and sinks of GHGs, which is also linked to current vulnerability (e.g., through land-use change, economic activities, air pollution and human health). The mitigation analysis may identify options that could help reduce future vulnerabilities to climate change.

5.2.3 The linkage with NAPAs

NAPAs are special GEF-funded projects for LDCs that focus on urgent and immediate adaptation needs. A NAPA should be action-oriented, country-driven, flexible and based on national circumstances.

No new research is required to prepare the NAPA. Rather, a country synthesises the available information, carries out an assessment of vulnerability to current climate variability and extreme events and of areas where risks would increase due to climate change, identifies key adaptation measures as well as criteria for prioritising activities, and creates a prioritised short list of activities. The development of a NAPA also includes short profiles of projects and/or activities intended to address urgent and immediate adaptation needs of LDCs.

Key findings from the NAPA process should feed directly into V&A assessments under the Second National Communication.

NAPA information resources

- Guidelines for the preparation of NAPAs: *http://unfccc.int/text/program/sd/ldc/documents/13a04p7.pdf*
- Annotated guidelines for the preparation of NAPAs: *http://unfccc.int/text/program/sd/ldc/documents/annguide.pdf*

5.2.4 Methods and tools for V&A assessments

As noted earlier, selection of methods and tools will depend upon the questions to be addressed, national conditions, data availability and the technical, financial and human resources available. The UNFCCC *Compendium of Decision Tools to Evaluate Strategies for Adaptation to Climate Change* (1999) provides useful overviews that will assist the national team in its decision-making. The NCSP also has three handbooks that will provide guidance on developing climate and socio-economic scenarios.

Additional resources

The resource centre of the NCSP's Knowledge Network on V&A (*http://ncsp.va-network.org*) hosts a range of guidance materials, references, software packages and links to data sources for assessing climate change vulnerability and adaptation.

5.3 Reporting on V&A under the National Communication

Under the Convention, non-Annex I countries shall provide information on their vulnerability to the adverse effects of climate change and on adaptation measures being taken to meet their specific needs and concerns arising from these adverse impacts. The UNFCCC recommends that countries

provide: a clear description of data sources and methods used; consistent and transparent use of terminology; technically founded and policy-relevant elaboration on key vulnerabilities and adaptation responses; and explicit treatment and representation of uncertainties.

Apart from reporting to the UNFCCC, the Second National Communication also represents a valuable opportunity to inform media, academia and research institutions, relevant government departments, schools and, especially, policy-makers and the donor community about the results of the V&A assessments. Therefore, national teams should develop a strategy for reporting findings to different stakeholders. Ensuring that the results are appropriately and effectively presented will help maximise the impact of the studies.

Reporting on adaptation projects

In addition, non-Annex I countries are encouraged to include information on:

- Programmes containing measures to mitigate and adapt to climate change; and, particularly,
- Opportunities for the implementation of adaptation measures, including pilots and/or demonstration projects.

The outputs from V&A assessments can serve as the basis for formulating the adaptation projects that have been identified, therefore, it is important to ensure their policy relevance. In this way, the Second National Communication becomes a critical part of the decision-making routine for project ideas.

6 IMPLEMENTING THE NATIONAL COMMUNICATION PROJECT: OTHER COMPONENTS

Countries can also provide information in the national communication considered relevant to achieving the objectives of the Convention and addressing climate change at the national level.

The information can include:

- Steps taken to integrate climate change into relevant social economic and environmental policies;
- Activities related to technology transfer;
- Climate change research and systematic observations;
- Research to adapt to and mitigate climate change;
- Information on education, training and public awareness;
- Information on capacity building at the national, regional and sub-regional levels; and
- Efforts to promote information sharing.

Resources and tools to assist with these components are outlined on the opposite page.

As some non-Annex I countries are receiving funds as part of their national communication enabling activity project to carry out a technology needs assessment, this component is elaborated further in *Section 6.1.*

6.1 Technology Needs Assessments

Reporting on technologies should not require additional reporting or an unnecessary research burden for those drafting the National Communication. The scope of this section should focus on the types of technology identified and the criteria for selecting the technologies, keeping in mind the target audience. Essentially, the reporting should inform a policy audience of short-, medium- and long-term technology needs and consider both hard and soft technologies.

The Second National Communication can reach a wide domestic and international audience, conveying both technology needs and market opportunities. Therefore, countries may wish to provide detailed information on specific technology markets or sectors that are critical to advancing climate change objectives and national development needs. Similarly, a technology needs assessment can advance specific project opportunities by providing information on projects requiring clean energy technologies. Finally, climate technology research needs can be elaborated by providing recommendations on R&D priorities, consistent with strategies for development of domestic industry.

Numerous criteria could be used in the prioritisation process. For example, countries might consider whether the sources of the technologies are international or domestic, given that domestic technologies will have more positive impacts on local development and job creation. Or, technologies may be identified that address climate change issues driven by national development priorities.

When reporting on technology needs, it is important to ensure consistency with findings in other relevant sections of the national communication. Link technology needs with sustainable development priorities and establish criteria for technology reporting consistent with current and emerging needs. Target your audience with a clear understanding of their potential interest in technology information and needs, and make the reporting relevant – avoid a "wish list" of projects. Instead, communicate clear messages and convincing information for policy-making (e.g. how energy efficiency improvements to reduce GHG emissions may also contribute to energy conservation programmes at the national or local level). Also note that it is enough to provide an overall picture of barriers to technology transfer – no detailed analysis is expected.

Linking technology needs and technology information with other thematic components

Ensure that technology needs are consistent with findings of the mitigation analysis. Information on technologies for adaptation is also likely be more prevalent in the Second National Communication, as compared to the initial, partly because of the larger focus on adaptation in the past few years. Consult with stakeholders involved in both the mitigation and adaptation assessments and remember that a given technology may contribute to both adaptation and mitigation. For instance, technologies to improve water use efficiencies may rely upon clean energy technologies.

Additional resources

Assessing Technology Needs to Address Climate Change: NCSP Handbook, 2003
http://ncsp.undp.org/report_detail.cfm?Projectid=158

The UNFCCC User Manual also makes note of the following websites:

Global change research
http://www.geo.ucl.ac.be/LUCC/links/links.html
http://www.igbp.kva.se/cgi-bin/php/frameset.php
http://www.ihdp.org/

Global change research (continued)
http://www.geo.ucl.ac.be/LUCC/links/links.html#Institutions_and_Networks
http://www.apn.gr.jp/
http://www.iai.int/
http://www.wmo.ch/web/wcrp/wcrp-home.html

Systematic observation
http://www.wmo.ch/web/gcos/gcoshome.html
http://www.fao.org/GTOS/
http://ioc.unesco.org/goos/
http://www.pol.ac.uk/psmsl/programmes/gloss.info.html

Technology transfer
http://www.grida.no/climate/ipcc/tectran/051.htm
http://www.grida.no/climate/ipcc/tectran/290.htm
http://ttclear.unfccc.int/ttclear/jsp/
http://unfccc.int/resource/docs/tp/tp0199.pdf
http://unfccc.int/program/sd/technology/index.html

Education, training and public awareness
http://www.devalt.org/newsletter/sep03/of_1.htm
http://unfccc.int/program/sd/article6/index.html

Capacity-building
http://unfccc.int/program/sd/cb/system.html

7 PUTTING PLANS INTO ACTION

7.1 Project Development

Under Decision 17/CP.8, non-Annex I Parties are encouraged to provide, to the extent their capacities permit, a list of projects proposed for financing, in accordance with Article 12, paragraph 4, of the Convention, in preparation for arranging the provision of technical and financial support.

In addition, non-Annex I Parties may include information on opportunities for the implementation of adaptation measures, including pilot and/or demonstration adaptation projects, being undertaken or proposed. They may also provide information on barriers to the implementation of adaptation measures. They may include, as appropriate, information on how support programmes from Parties included in Annex II to the Convention are meeting their specific needs and concerns relating to vulnerability and adaptation to climate change.

A number of avenues for financing of adaptation projects are available. For more information, visit: *http://www.undp.org/gef/adaptation/index.htm*.

7.2 Synergies with Other Rio Conventions and Development Objectives

The GEF-funded National Capacity Self Assessments (NCSA) enable countries to assess their priorities and needs for capacity building to address global environmental issues, in particular for biodiversity, climate change and land degradation. As part of the exercise, countries explore synergies across multiple GEF focal areas.

Lessons learned from these projects can feed into planning for the national communication. For example, countries might use the partnerships developed under the project to expand the National Climate Committee. Feedback might be sought from biodiversity and land degradation experts on priority areas for V&A assessments.

For more information on the NCSAs, go to:
- *http://ncsa.undp.org*

7.3 Promoting Results

Promoting the results of the national communication can play an important role in raising awareness at the national level of climate change issues and progress towards Article 6 of the Convention. Awareness-raising activities should be prepared according to well-defined objectives and with the target audience clearly in mind. For example, the objective of reporting on the national communication to certain industry leaders or government departments might be in order to communicate policy implications of climate change, while a campaign aimed at the public might be more generally about climate issues.

There are many information resources that have been prepared by countries in different languages. A more general guidance document on preparing an awareness-raising strategy can be downloaded on the project website of the UNDP-GEF project, Capacity Building for Improving the Quality of Greenhouse Gas Inventories (Europe/Commonwealth of Independent States): *www.rec.org/REC/Programs/UNDP-GEFInventories/training_materials.html*

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APPENDIX: ROLES AND RESPONSIBILITIES

At the NCSP Second National Communication Initiation Workshop for African Countries, held in Pretoria, South Africa in September 2006, the following roles and responsibilities for various groups involved in the preparation of Second National Communications were suggested by Dr George Manful, UNEP Senior Task Manager for climate change enabling activities.

National Climate Change Committee (NCCC)

Responsible for supervising SNC project implementation. It should be Chaired by the ministry responsible for the preparation of SNC, with national project coordiantor serving as secretary, and meets every four months.

Composition

- National Focal Point on Climate Change
- National Project Coordinator of the SNC
- GEF Operational Focal Point
- Representatives from key project collaborating agencies/ institutions, e.g. Ministries of Agriculture, Water Resources, Forestry, Health, Energy, Economy, Planning, Communication, Education, Urban Planning and Transport, as well as universities, research institutions, NGOs, private sector.

Responsibilities

- Monitor, evaluate, advise and guide the implementation of the project;
- Collaborate with the PMT in implementing the Second National Communication project;
- Ensure the preparation of Second National Communications document is in conformance with UNFCCC guidelines relating to the formulation of national communications as well as responsive to national needs;
- Formulate necessary measures, where appropriate, to ensure that the proposed project activities and outputs accomplish the project's objectives;
- Provide oversight responsibility to ensure a smooth transition from the Second National Communication activities to any other follow-up measures.

National Project Coordinator

Oversees project implementation, under Implementing Agency Task Manager supervision and is responsible for:

- In consultation with SNC Steering Committee, oversees day-to-day management, co-ordination and supervision of the project;
- Co-ordinates all project activities with leaders of technical expert groups, national and international agencies, including NCSP/UNDP/UNEP, GEF, IPCC and UNFCCC secretariats;
- Prepares a detailed project workplan and ToRs for the project consultants;
- Liaises with the relevant stakeholders such as government ministries, research institutes, NGOs, etc, in order to involve their staff in the project activities, and to gather and disseminate information relevant to the project.
- Identifies, interviews and recruits consultants to work for the project;
- Establishes and promotes links with related national and regional projects, such as the "NCSA for Global Environmental Management";
- Prepares quarterly reports and ensures all national project outputs are sent to Implementing Agency;
- Manages project expenditures according to the budget;
- Identifies national training needs and organises appropriate courses and trainings;
- Organises national workshops according to the project workplan;
- Attends, whenever possible, the relevant regional and international workshops and conferences;
- Reviews all materials generated during the project;
- Manages publication and dissemination of reports identified as project outputs;
- Coordinates negotiations in co-operation with government and financing institutions to identify and mobilise sources for follow-up activities.

Technical Expert Groups (TEGs)

Each TEG will consist of consultants from relevant sectors, including government agencies, academic institutions, NGOs and private sector and report to the National Project Coordinator. The National Project Coordinator and the heads of each TEG will form the project management team. The National Project Coordinator will manage all technical assistance and recruitment of consultants for day-to-day project work. The head of each TEG will develop a work plan for his/her group's activities, in conjunction with the National Project Coordinator, and also provide technical assistance for project activities and training on scientific or methodological aspects of project work.

GHG Inventory

- Assist National Project Coordinator in preparing detailed workplan;
- Provide feedback on selection and application of appropriate inventory methodologies;
- Assist in identifying sources of national data and agree on the outputs from key source analysis;
- Recommend ways of improving national emission factors;

- Contribute substantially to development of the National Inventory Report and identify follow-up activities;
- Assist the National Project Coordinator in peer review of the outputs of national consultants;
- Suggest technical capacity building activities and participate in the sub-regional, regional and international training on GHG inventory.

Mitigation Analysis TEG

- Assist National Project Coordinator in preparing detailed workplan;
- Advise on selection of macro-economic models for evaluating mitigation options and measures for GHG emission reduction;
- Provide overview and select measures to mitigate climate change and identify the follow-up activities;
- Assist National Project Coordinator in arranging the national review and training workshops on climate change mitigation measures;
- Suggest technical capacity building activities and participate in the subregional, regional and international trainings on mitigation measures analysis.

Vulnerability and Adaptation Assessment TEG

- Assist National Project Coordinator in preparing detailed workplan;
- Advise on selection of appropriate methodologies for impact, vulnerability and adaptation assessments and contribute to the assessment of vulnerability and climate change impacts;
- Contribute to the development of climatic scenarios and selection of relevant methodologies as appropriate;
- Contribute substantially to development of a National Strategy on Adaptation to Climate Change, which responds to relevant policy questions, and identify the follow-up activities;
- Help organise national peer reviews and participate in relevant training workshops;
- Assist in exploring options for integrating climate concerns into national planning.

Research and Systematic Observation TEG

- Assist National Project Coordinator in preparing detailed workplan;
- Assess existing systems for early warning on extreme weather events and methods of seasonal forecasting;
- Analyse existing barriers for development of observation systems and research, and identify follow-up activities;
- Contribute substantially to development of a National Report on Research and Systematic Observation;
- Assist in arranging national review and awareness-raising workshops on research and systematic observation, and participate in relevant sub-regional, regional and international trainings.

Local and International Consultants

Consultants provide assistance for "short-term" tasks within the national communcation project. Local consultants typically lead TEGs and/or undertake the project activities, while international consultants are recruited to train local teams, review project outputs and share their broader experience. The expected types of tasks for an international consultant would include training, building capacity, advising, assisting and reviewing – activities that enable national teams but do not carry out the work (e.g., conduct surveys or assessments, draft reports) for them.

The terms of reference for a consultant should define:

- Details of the work to be performed;
- With whom the consultant will work;
- Where the work is to be carried out;
- What outputs are to be delivered;
- How much time is available;
- When the work is required; and
- To whom the consultant will report.

It is important to monitor the consultant's progress – is he/she doing what you expected? interacting with the project team as you planned? providing the reports you wanted and on time? working in your interests? available when you wanted? Be sure to clarify problems as soon as they arise so that the national communication project remains on track.

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