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National communications from Parties not included in Annex I to the Convention

Work of the Consultative Group of Experts on National Communications from Parties not included in Annex I to the Convention

**Report of the Consultative Group of Experts on National Communications
from Parties not included in Annex I to the Convention on the outcomes
of its examination of national communications from Parties
not included in Annex I to the Convention**

**Note by the Chair of the Consultative Group of Experts on National
Communications from Parties not included in Annex I to the Convention**

Summary

This document contains an analysis of technical problems and constraints identified by the Consultative Group of Experts on National Communications from Parties not included in Annex I to the Convention based on the examination of 12 initial national communications submitted by Parties not included in Annex I to the Convention from 2 April 2005.

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I. Introduction

A. Mandate

1. The Conference of the Parties (COP), by its decision 3/CP.8, adopted the terms of reference for the Consultative Group of Experts on National Communications from Parties not included in Annex I to the Convention (CGE), which mandated the CGE, inter alia, to examine national communications and to provide technical advice through the organization of regional or subregional hands-on training workshops on national greenhouse gas (GHG) inventories, vulnerability and adaptation, and mitigation, as well as training on the use of guidelines for the preparation of second and subsequent national communications by Parties not included in Annex I to the Convention (non-Annex I Parties).
2. In fulfilling the above-mentioned mandate, the CGE examined the initial national communications submitted to the secretariat. To date, the CGE has presented two reports¹ to the Subsidiary Body for Implementation (SBI) containing assessment of technical gaps identified by Parties and recommendations on financial and technical support for the preparation of national communications.
3. The SBI, at its twenty-fourth session,² requested the CGE, consistent with the mandate contained in the annex to decision 3/CP.8, to examine the initial national communications submitted to the secretariat from 2 April 2005 and to prepare a report for consideration by the SBI at its twenty-seventh session.

B. Scope of the note

4. This document contains the outcome of the examination of 12 initial national communications as well as a summary of the technical problems and constraints that have affected the preparation of initial national communications by non-Annex I Parties. It also outlines recommendations made by the CGE to improve the process of preparation of national communications by non-Annex I Parties.
5. The CGE examined those 12 initial national communications³ that were submitted to the secretariat from 2 April 2005.⁴ The previous report of the CGE contained the outcomes of the examination of 41 initial national communications submitted by non-Annex I Parties as of 1 April 2005.

C. Possible action by the Subsidiary Body for Implementation

6. The SBI may wish to consider the information contained in this document, particularly the recommendations, with a view to providing guidance to facilitate the preparation of national communications by non-Annex I Parties.

II. Organization of the work of the Consultative Group of Experts

7. In order to facilitate the work of the CGE, including the examination of 12 initial national communications, the members were grouped according to the following thematic areas: national GHG inventories; vulnerability and adaptation assessments; mitigation; and cross-cutting themes. The thematic groups examined the initial national communications at the seventh and eighth meetings of the

¹ FCCC/SBI/2002/15 and FCCC/SBI/2006/4.

² FCCC/SBI/2006/11, paragraph 25.

³ Bahrain, Fiji, Guinea-Bissau, Mozambique, Rwanda, Sao Tome and Principe, Saudi Arabia, Sierra Leone, Suriname, Tonga, United Arab Emirates and Venezuela (Bolivarian Republic of).

⁴ The most recent initial national communication received by the secretariat and examined by the CGE is from Sierra Leone; this communication was submitted on 8 January 2007.

CGE and, after the meetings, made use of the secretariat's listserver to exchange views on the outcomes of the examinations.

8. The CGE examined the following sections contained in the initial national communications of 12 non-Annex I Parties: national GHG inventories; vulnerability and adaptation assessment; research and systematic observation; GHG abatement analysis; education, training and public awareness; financial and technical support; technology transfer; information and networking; and capacity-building. In examining the 12 initial national communications, and following the mandate contained in the annex to decision 3/CP.8, the CGE endeavoured:

- (a) To identify and assess technical problems and constraints that have affected the preparation of initial national communications by those non-Annex I Parties that have yet to complete them;
- (b) To identify and assess, as appropriate, the difficulties encountered by non-Annex I Parties in the use of guidelines and methodologies for the preparation of national communications, and to make recommendations for their improvement;
- (c) To assess analytical and methodological issues, including technical problems and constraints in the preparation and reporting of GHG inventories, mitigation activities, vulnerability and adaptation assessments and other information, with a view to improving the consistency of the information provided, data collection, the use of local and regional emission factors and activity data, and the development of methodologies.

III. Outcomes of the examination of initial national communications

A. National greenhouse gas inventories

1. Assessment of technical problems and constraints in the preparation of national greenhouse gas inventories

9. Most Parties indicated their difficulties in securing reliable and/or sufficiently disaggregated national activity data in the energy, transport (automobile and aviation), industry, agriculture, forestry and waste sectors. A few Parties mentioned the unavailability of data on biomass fuel consumptions; on the other hand, three Parties reported emissions from biomass to be negligible in their countries. Parties relied mainly on the Intergovernmental Panel on Climate Change (IPCC) default parameters or on secondary information sources such as the International Energy Agency and the Food and Agriculture Organization of the United Nations. The difficulty in obtaining sufficiently disaggregated data made it difficult for some countries to apply IPCC or UNFCCC reporting tables that used modified or simplified reporting formats.

10. One Party indicated difficulty in obtaining accurate forestry data because of anthropogenic land-use change. Several Parties indicated the insufficiency in country-specific emission factors, especially in certain industrial sectors. Most Parties reported using IPCC default emission factors. Two Parties reported using locally derived default factors for some sources.

2. Assessment of difficulties in using the guidelines

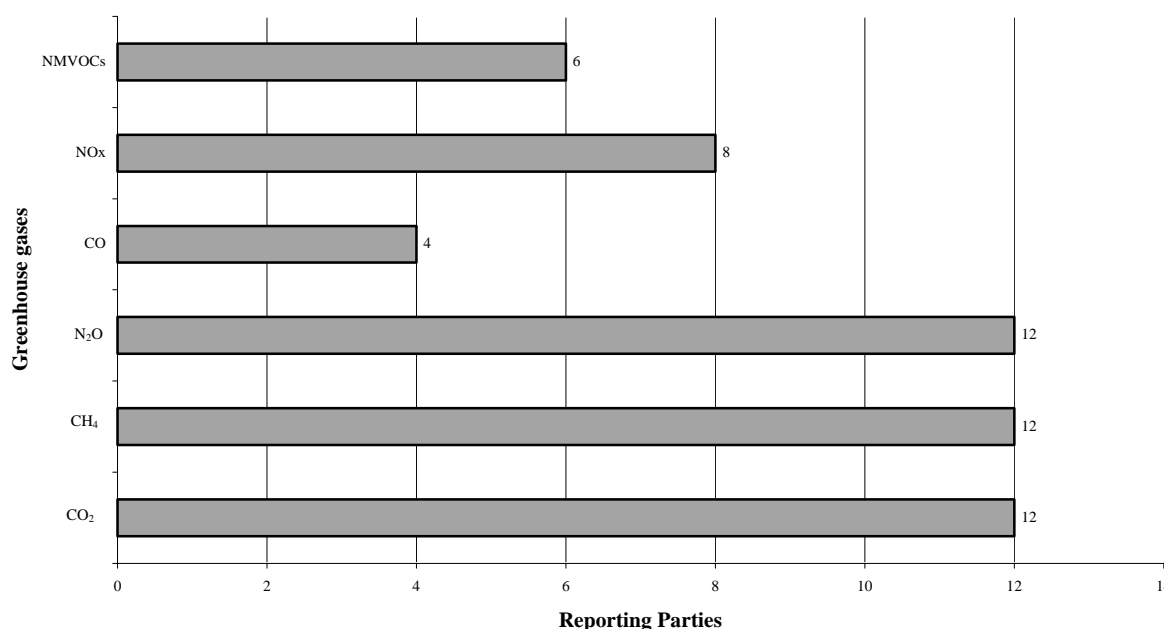
11. Most national communications examined followed the "Guidelines for the preparation national communications by Parties not included in Annex I to the Convention" (hereinafter referred to as the UNFCCC reporting guidelines for non-Annex I Parties), although this was not explicitly mentioned in some national communications. All Parties used mainly the methodologies contained in the *Revised*

1996 IPCC Guidelines for National Greenhouse Gas Inventories. Nevertheless there are some differences in reporting format. No Party indicated that they used IPCC good practice guidance reports.

12. All Parties reported emissions of carbon dioxide, methane and nitrous oxide, and one Party also reported hydrofluorocarbons. Furthermore, several Parties reported tropospheric ozone precursors, nitrogen oxides, sulphur dioxide and non-methane volatile organic compounds (NMVOCs), as well as carbon monoxide (see figure 1). Most Parties reported emissions for the year 1990 or 1994, and one Party reported emissions for 2003. Some Parties indicated that they had estimated emissions for other years, but only one Party included emission estimates in the national communications for more than one year. Only a few Parties used notation keys such as not estimated (NE), not occurring (NO) and included elsewhere (IE).

13. A few Parties reported their institutional set-up in preparation of national GHG inventories, whereas many Parties indicated difficulties in setting up and maintaining inventory teams and stressed the need for capacity-building.

Figure 1. Reporting pattern for greenhouse gases and their precursors



3. Analytical and methodological issues relating to national greenhouse gas inventories

14. A few Parties used the reference approach, whereas one Party conducted a detailed comparison between top-down and bottom-up estimates. Some Parties undertook uncertainty analyses that were qualitative rather than quantitative. Although some Parties reported emissions from international aviation and marine bunker fuels, there were differences in the breakdown of information.

15. Some Parties used the global warming potential values from the Third Assessment Report of the IPCC. Some Parties also reported aggregated GHG emissions and removals expressed in CO₂ equivalent. Methodologies used to estimate the GHG emissions and removals, including the derivation and use of national emission factors, were described only very generally in most national communications. Some Parties indicated that they used the IPCC worksheets or IPCC software in estimating the national emissions and removals, but no Party included the worksheets in the national communication.

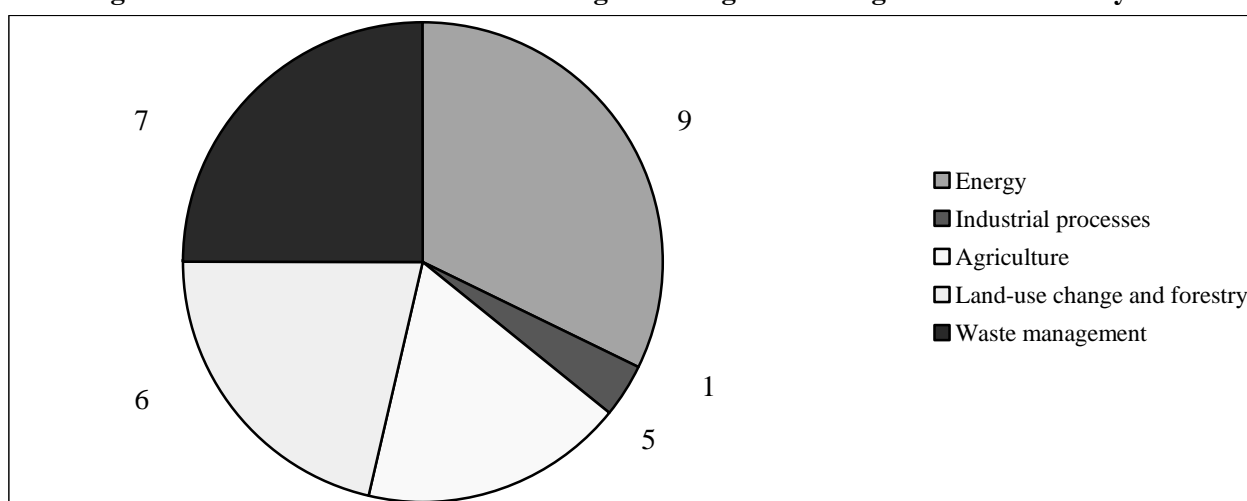
B. Greenhouse gas abatement analysis

1. Assessment of technical problems and constraints in greenhouse gas abatement analysis

16. Only one Party described its approach to the mitigation analyses. Three Parties did report on the tools/models that they used to analyse mitigation options in certain sectors (e.g. the use of comprehensive mitigation assessment process for the forestry sector). Most Parties did not report baseline and mitigation scenarios, since these entailed emission projections for which good quality data and analytical modelling tools would be needed.

17. Only one Party gave a description of the macroeconomic impact of mitigation measures in their country. Most descriptions of the impacts of mitigation measures were project based and thus focused on the micro level.

Figure 2. Number of Parties undertaking sectoral greenhouse gas abatement analysis



18. The analysis of the energy sector showed that most Parties identified mitigation measures relating to the transport subsector, followed by the residential subsector. Few Parties addressed the industrial sector and only one mentioned measures specific to the processes in the industrial sector (see figure 2).

19. Measures in the transport and residential subsector mostly encouraged improving the public transport system and the control of vehicles. Mitigation options in the residential sector focused on greater efficiency in the use of energy and efficient lighting, and improvement of air-conditioning systems. Many Parties provided information on renewable energy, and mentioned measures related to hydropower, biomass, solar power and wind energy. Some Parties also have ongoing renewable energy projects.

20. Most Parties mentioned the need for financial and technical assistance, as well as the need to enhance the analytical capability of Parties to undertake GHG abatement analysis.

2. Assessment of difficulties in using the guidelines for greenhouse gas abatement analysis

21. Most Parties included a description of programmes and/or projects related to sustainable development, specifically those that mitigate climate change (via abatement of sources and enhancement of sinks), in their national communications. Most Parties, however, partially included information for

calculating global emission trends. Many Parties included historical trends that could be extrapolated; but this type of estimation provides only a rough assessment of the global evolution of GHG emissions.

22. The impacts of implementing mitigation measures were only partially reported by some Parties. Few Parties included information on allocating resources to implement mitigation measures that are additional to those in the baseline scenarios.

23. Only three Parties reported information in addition to the level of GHG emission reductions, such as on barriers and opportunities, financial considerations, technological options, policy development and institutional capacity-building.

24. The information on mitigation projects reported by most Parties was largely qualitative in nature. For instance, only a few Parties provided information on the costs and benefits of implementation, mitigation potential, environmental and social benefits, and constraints.

3. Analytical and methodological issues relating to greenhouse gas abatement analysis

25. All but one Party provided a description of the social and economic development framework or context for climate change mitigation, which was usually placed in the introductory part of the national communication.

26. Few Parties included information related to the screening and prioritization of mitigation options, as well as the assessment of the costs and GHG reduction potentials associated with these. No Party reported on the consolidation of costs and reduction potentials across sectors in the form of marginal cost curves of GHG mitigation potential.

C. Vulnerability and adaptation assessments

1. Assessment of technical problems and constraints

27. All Parties followed the UNFCCC reporting guidelines for non-Annex I Parties in reporting their national communications. Some provided detailed information on vulnerable areas or sectors, such as the economy, human settlements and infrastructure, agriculture, forestry, coastal resources, biodiversity, water resources, the fishing industry, human health, food security, energy and ecosystems.

28. All initial national communications examined followed a sectoral approach in the assessment of vulnerability and adaptation to climate change. When this approach is used, cross-cutting issues such as socio-economic impacts may be missed in reporting. However, compared with earlier submissions of initial national communications, this gap in reporting is now increasingly being addressed by Parties.

29. All Parties reported on the adaptation strategies and measures being implemented in their countries. The degree of detail of information reported varied across Parties. Only a few Parties mentioned the methods they are using to assess or analyse adaptation measures. None of the Parties prioritized its adaptation measures or provided cost estimates, but a few described their policy as regards mainstreaming adaptation into national policies and programmes. Information about socio-economic implications of adaptation measures, or about trade-offs between different measures, was rarely provided; nevertheless, a number of Parties mentioned that they encounter barriers in implementing adaptation options. In one case, a list of adaptation projects was presented along with options for financing. The projects were designed to strengthen national capabilities in different sectors including technical transfer, capacity-building, institutional cooperation and networking.

30. Most Parties stressed that, as developing countries, they were more vulnerable to the adverse effects of climate change. At the same time, they expressed the need for capacity and technical resources

to develop tools which they could apply in their vulnerability and adaptation assessment and thus be able to elaborate appropriate measures that respond to adaptation needs.

2. Assessment of difficulties in using the guidelines

31. All Parties analysed the agriculture sector, followed by water resources and coastal resources. Parties reported measures such as the introduction of new and more resistant crops, and changes in the use of fertilizers and herbicides and in irrigation methods. Ecosystems and human health were taken into account by more than half of the reporting Parties. Nine reporting Parties expressed concern about sea level rise and its consequences, such as damage to agriculture, displacement of population, coastal erosion and loss of biological diversity. Adaptation measures focused on the water resources and coastal management sectors. The importance given to measures related to water resources reflects the emphasis on water management as a key area for adaptation in the future. Five Parties emphasized that water salinization reduces water availability for agricultural purposes, which may have a negative effect on food security.

32. Five Parties reported on the adverse effects of El Niño/Southern Oscillation (ENSO) events and expressed concern that climate change may increase the duration, intensity and number of such events. Most Parties noted with concern the direct and indirect negative impacts of climate change on human health. Contaminated water resources resulting from inundation and flooding may intensify diseases such as dengue and malaria. Examples of impacts include flooding, inundation, droughts and tropical cyclones.

3. Analytical and methodological issues

33. Most Parties used the IPCC Technical Guidelines for Assessing Climate Change Impacts and Adaptations and the IPCC's Common Methodology for Assessing the Vulnerability of Coastal Areas to Sea-Level Rise. In one case, however, a baseline scenario was constructed by using a geographic information system and remote sensing techniques, and a multiple sea level rise approach with three climate change scenarios – low (0.2 m rise), moderate (0.5 m rise) and high (1 m rise) – to offset data limitations and to account for uncertainties associated with topographic perturbations. Expert judgement and statistical methods were used in cases where global climatic models did not account for ENSO climate variability or changes in the frequency and/or magnitude of extreme climate events. In addition, Parties used simulation tools such as Watbal9F and “Plant Gro” to estimate the recharge to groundwater and to assess the potential impacts of changes in climate and sea level on sectors such as forestry and agriculture.

34. Many Parties simulated climate change scenarios, using global climatic models such as CCC199 from the Canadian Center for Climate Modelling, CSI 296 from the Commonwealth Scientific and Industrial Research Organization (CSIRO), ECH498 from the Max-Planck-Institute for Meteorology, GFDL90 from the Geophysical Fluid Dynamics Laboratory, and HAD2TR95 from the Met Office Hadley Centre for Climate Change. Other global climatic models including GENESIS (Global Environmental and Ecological Simulation of Interactive Systems) and models from the Met Office, the Center for Coastal Monitoring and Assessment, CSIRO and the German Climate Computing Center (DKRZ) were also used by Parties. Some Parties used AIM (Asian-Pacific Integrated Model) and another integrated model, MAGICC/SCENGEN (Model for the Assessment of Greenhouse-gas Induced Climate Change/SCENario GENerator) to assess the implications of broad shifts in climate patterns on the vulnerability of sensitive systems and to project rainfall and temperature changes.

35. The Holdridge life zone classification model and the Forest Gap model were the two biophysical models used in evaluating the potential impacts of climate change on forest ecosystems. Health was assessed by using Pacific Climate Impact Models (PACCLIM). In some instances, the outputs of these

models differ. For example, in assessing the impacts of climate change on water resources, the CSIRO scenario indicated an increase in maximum and minimum stream flows, whereas DKRZ suggested the opposite. Some Parties used models that were designed for specific needs of other countries. The reporting Parties used various time horizons, and the problems associated with lack of data and applicability of models limited the analyses carried out by most Parties.

36. Six Parties examined the economic impacts, of climate change; three of them analysed the economic impact of the planned adaptation measures. Most Parties reported linking climate change with development by integrating sustainable development priorities and climate change issues into national policies, programmes and/or strategies.

D. Other information relevant to the implementation of the Convention

1. Research and systematic observation

37. Almost all Parties reported, to some extent, on activities relating to research and systematic observation; however, the quality and content of reporting varied significantly. Most reporting Parties devoted a chapter, section or subsection to this issue. In a few national communications, no information on research activities was provided, and others provided sparse information covering mainly the work undertaken within the framework of the initial national communication. In general, information on systematic observation was provided, but there were instances where little or no information was provided. In most cases, Parties tried to provide information on the status of government-led programmes and on activities relating to meteorological, atmospheric and oceanographic research and observation, but the quality and scope of this information varied among Parties.

38. Some Parties included general information on ongoing or planned research programmes for climate change; however, few reported on specific research activities relating to the impacts of climate variability, ENSO or extreme events. Only some Parties provided clear information on research activities proposed to be undertaken on impacts, vulnerability assessment, adaptation and mitigation. Few Parties offered information on institutional arrangements to facilitate research on climate change issues.

39. National or regional meteorological services constitute the main observation system in all countries whose reports were examined. Information provided on systematic observation was sparse and details were minimal. Nevertheless, some Parties reported on needs and priorities for systematic observation, such as rehabilitation of existing networks and the creation and improvement of observation networks for collecting and processing ecosystem data and for integrating observation networks. Other reported needs included recruitment of qualified staff and increase in technical capacity. Three Parties reported on their participation in global research and systematic observation systems, and six Parties reported on their cooperation with regional and international organizations.

40. Most Parties mentioned the need for assistance in undertaking and implementing the following climate change research activities in accordance with national priorities:

- (a) Develop computer-based software programs that will integrate climate assessments with sectoral impacts on the environment;
- (b) Establish a comprehensive weather observation network;
- (c) Establish a national database and improve data collection and processing;
- (d) Establish new observation networks for ecosystems, forests, pollution and socio-economics.

41. Almost all Parties highlighted their limited capacity to undertake research and systematic observation activities in areas such as accessing, analysing and managing data relevant to climate change, and the influence of climate variability and extreme events on various sectors. Three Parties emphasized the need for observation networks and high quality data, particularly in countries that experience internal conflicts or civil wars, which inhibit research.

42. The examination of these initial national communications indicated that there was a lack of institutional arrangements to facilitate research and systematic observation. Although most Parties mentioned that there were government departments dealing with environmental issues, only one Party reported on the establishment of research institutes at the national level. Another Party reported that the setting up of institutions for climate change issues was still under development. Five Parties reported on the involvement of independent and academic institutes and the private sector in research activities.

43. In general, the information provided on research and systematic observation was not sufficient to make any generic assessment of the technical difficulties and constraints faced by Parties. The CGE noted that the issue of lack of financial resources and human capacity, as well as capabilities to undertake research and systematic observation activities as reported in document FCCC/SBI/2005/18/Add.4, is applicable to this group of 12 countries.

2. Education, training and public awareness

44. Most Parties described the importance of education, training and public awareness in promoting the implementation of activities under the Convention and emphasized the need to establish and, where appropriate, improve national programmes on education, training and public awareness relating to climate change. Many Parties noted that target audiences, such as students and teachers, the public at large, policymakers, non-governmental organizations (NGOs) and community-based organizations, and academic and research institutions, are key to ensuring a holistic approach to raising awareness of climate change issues.

45. Although the quality and scope of reporting varied among Parties, almost all Parties devoted a chapter, section or subsection to education, training and public awareness. Most Parties made the distinction between ongoing activities and proposed programmes or initiatives yet to be implemented. Some Parties also provided information on existing bilateral and multilateral cooperation activities.

46. Most Parties recognized that the participation and collaboration of NGOs and local communities could prove useful in increasing public awareness of climate change issues. Most Parties also evaluated the public accessibility of information on climate change and identified that there was broad public participation. Only one Party reported on the establishment of a national website on climate change, whereas two Parties mentioned the need to create and maintain a national website on climate change.

47. The information provided on education relates mostly to programmes and initiatives on general environmental issues incorporated at different levels of the education system. There was little or no information provided on the extent to which climate change is included in different educational programmes. However, some Parties recognized the need to introduce climate change issues into the curricula at different levels in the educational system.

48. Some Parties reported on training received for the preparation of initial national communications. Most Parties provided information on the focus and target groups of the training programmes. They did not, however, provide detailed information on the needs and gaps relating to training. In general, Parties noted the need to train national experts in national GHG inventories, vulnerability and adaptation assessments, and mitigation analysis in order to build and enhance the capacity to conduct assessments, analyse data and prepare national reports. The reporting Parties also

highlighted the need to increase technical capacity among local scientists and technical and managerial staff, in order to be able to carry out systematic observations and research work.

49. Some Parties noted that a key constraint in addressing national concerns relating to education, training and public awareness was the lack of financial and technical support. In particular, financial support is needed to fund scholarships and training programmes on various issues in climate change, and support to raise public awareness on environment issues.

3. Technology transfer

50. No Party reported on the outcomes of technology needs assessments. Some Parties dedicated a chapter or section on technology needs, and in some cases included a detailed list of their needs in specific technology sectors; however, it was not indicated which tool, approach or methodology was used. No Party provided information on activities relating to the transfer of and access to environmentally sound technologies in any specific sector.

51. Some Parties reported on their technology needs relating to adaptation and mitigation. One Party provided information on the use of traditional technologies.

52. Reporting on technology transfer was limited, which makes it difficult to draw conclusions on the needs and constraints of Parties. It is important to note that the lack of information may reflect the lack of knowledge on the availability of existing technologies in the various sectors. This may also show that the information provided in the section on technology transfer in the UNFCCC reporting guidelines for non-Annex I Parties is not specific enough.

4. Information sharing and networking, and institutional arrangements

53. No Party devoted a chapter, section or subsection to information sharing and networking. The information that was provided by some Parties was sparse and contained little detail, and thus it was not possible to assess gaps and constraints encountered by Parties in this area.

54. Although all Parties noted the value of the development of information systems as an important part of preparing national GHG inventories, vulnerability and adaptation assessments and mitigation analyses, only two Parties indicated the need for promotion of information sharing and networking at the national, subregional/regional and international levels. Therefore it is difficult to evaluate how the exchange of information and networking could be improved with the provision of appropriate human and financial resources, and of additional data and information.

55. Some Parties emphasized the importance of integrating climate change consideration into national development planning processes. Many Parties reported that the major constraints were the lack of appropriate institutional arrangements and a lack of clarity of roles and responsibilities of experts and institutions in carrying out the technical studies relating to the preparation of national communications. The lack of public awareness should also be considered as the other main constraint in promoting national development planning on climate change.

56. All Parties reported on the need to enhance accessibility to information in order to address problems related to the preparation of national communications. Some Parties noted the lack of consistency of data and information provided by various regional and international organizations for the preparation of various components of national communications, and called for measures to address the problem.

57. Some Parties also reported weak institutional arrangements and lack of human resources and capacity to conduct systematic data collection. The absence of universities and/or research centres

working on climate change issues made it difficult to implement some of the activities relating to the preparation of national communications.

5. Capacity-building

58. Building and strengthening capacity is a critical issue for non-Annex I Parties. Almost all Parties reported on their capacity-building needs and activities, although few devoted a specific chapter or section to capacity-building, since in a number of cases these concerns were expressed in the various chapters of the national communications. The quality and scope of the information provided varied among Parties, and was particularly sparse in a few national communications.

59. The information on capacity-building contained in national communications is being used to regularly monitor the implementation of the capacity-building framework annexed to decision 2/CP.7, following steps outlined in decision 4/CP.12. This information is regularly compiled and synthesized by the secretariat and reported to the COP. In addition, all Parties have the opportunity to make submissions annually on capacity-building, pursuant to decisions 4/CP.12 or 6/CMP.2. A structured format for reporting on capacity-building was developed at SBI 26 (FCCC/SBI/2007/15, para. 92).

60. In general, Parties reported the lack of human and institutional capacity to prepare national communications and to implement the other provisions of the Convention as a key constraint. Other capacity-building needs identified include: expertise on how to integrate climate change issues into national development plans; appropriate and comprehensive training for conducting vulnerability, adaptation and mitigation studies; ensuring sustainability of the national communication process; and increasing education and public awareness.

6. Financial and technological needs and constraints

61. According to decision 10/CP.2, non-Annex I Parties may describe the financial and technological needs and constraints associated with the communication of information including activities and measures envisaged under the Convention. Few Parties included a separate section or subsection with information on financial and technological needs. A few Parties included a list of projects that need financial support.

62. All Parties reported on problems and constraints of a financial and technological nature that affected their capacity to prepare their national communications, although the type, extent and nature of these constraints varied across Parties.

63. In general, Parties reported on their financial and technological support needs in a number of areas, including: establishing sustainable national systems for the collection, monitoring, reporting, verification and storage of GHG data; strengthening systematic observation systems; establishing models, tools and technological resources; increasing access to technologies for adaptation and mitigation; enhancing human and institutional capacity; and increasing education and public awareness.

64. Most Parties indicated that the provision of financial resources and the transfer of technologies by developed countries are crucial for implementation of activities under the Convention. Inadequate funding, lack of appropriate tools for assessments, limited sectoral coverage, and lack of human capacity and expertise hindered the implementation of activities relating to climate change.

65. All Parties acknowledged receiving financial and technical assistance from the Global Environment Facility and/or bilateral programmes towards the preparation of national communications. In general, most Parties reported the need for further financial and technical assistance; however, there is a need to provide detailed information on areas and activities to be supported.

IV. Recommendations for improving the preparation of national communications by non-Annex I Parties

66. Given the differences in the level and scope of reporting in the 12 initial national communications that were submitted to the secretariat, the recommendations are as follows:

National greenhouse gas inventories

- (a) Strengthen institutional capacity, develop country-specific emission factors and improve data collection in non-Annex I Parties;
- (b) Non-Annex I Parties should endeavour to establish and maintain reliable data sets of activity data, especially in the areas of energy consumption, agriculture and forestry;
- (c) Non-Annex I Parties are highly encouraged to use the IPCC emission factor database (EFDB) and at the same time, whenever country-specific emission factors are developed, these should be forwarded to the EFDB so as to assist other non-Annex I Parties;
- (d) Non-Annex I Parties are encouraged to include descriptions of methodologies used in their inventory preparation, especially relating to local or country-specific methods, data collection and choice of emission factors;

Greenhouse gas abatement analysis

- (e) Non-Annex I Parties that are in the process of preparing their initial national communications may refer to decision 17/CP.8 and the user manual for the UNFCCC reporting guidelines for non-Annex I Parties⁵ as important guides for the information that can be reported in this section;
- (f) Non-Annex I Parties should be equipped with the tools and skills needed to conduct mitigation analyses. This will also enable them to prioritize, integrate and synthesize on the macro-level the various mitigation options available to them;
- (g) Non-Annex I Parties may highlight in their reporting the ancillary or overlapping co-benefits of climate change mitigation with other related environment–development concerns (such as resource management, poverty and health, and clean and sustainable development);

Vulnerability and adaptation assessment

- (h) Non-Annex I Parties are encouraged to provide more information on the socio-economic implications of adaptation measures;
- (i) Non-Annex I Parties are encouraged to prioritize adaptation measures and to provide estimated economic costs of climate change impacts;
- (j) Non-Annex I Parties should provide detailed information on the impacts of climate change in their country;
- (k) Parties are encouraged to provide more information on adaptation policies and mitigation measures and their success;

⁵ <http://unfccc.int/national_reports/non-annex_i_natcom/guidelines_and_user_manual/items/2607.php>.

Cross-cutting themes

- (l) Parties are encouraged to use the template on cross-cutting themes in national communications from non-Annex I Parties (FCCC/SBI/2007/3) during the process of preparation of second and subsequent national communications so as to improve the scope and quality of reporting on: research and systematic observation; education, training and public awareness; technology transfer; information sharing and networking and institutional arrangements;
- (m) Parties are encouraged to coordinate their annual reporting to the COP on activities to implement the capacity-building frameworks under decision 4/CP.12 with the information provided in their national communications, including through the application of the template mentioned in paragraph 66 (l) above;
- (n) Technical and financial assistance should be provided to Parties, in particular for data acquisition, data management systems, improving monitoring capabilities, improving systematic observation and for conducting research on other areas of the national communications;
- (o) Decision-making tools should be developed to assist Parties in determining or prioritizing their technology needs and to provide clearer guidelines in reporting on technology transfer;
- (p) Bilateral, multilateral and other international organizations are encouraged to support national, regional and subregional centres of excellence to help facilitate the exchange of information and experience and to enhance South–South and North–South cooperation.

67. In preparing national communications, the CGE also recommends that national experts take full advantage and make use of various CGE training materials for conducting national GHG inventories, vulnerability and adaptation assessments and mitigation assessments available at the UNFCCC website.⁶

⁶ <http://unfccc.int/resource/cd_roms/na1/start.htm>.