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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 (CGE) based on the examination of 41 initial national communications submitted by Parties not included in Annex I to the Convention (non-Annex I Parties) between May 2002 and April 2005. The Subsidiary Body for Implementation may wish to take note of the recommendations made by the CGE when providing technical advice on how to further facilitate the preparation of national communications of non-Annex I Parties.

* This document was submitted after the due date to allow time for the members of the Consultative Group of Experts to conduct intensive consultations.

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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 the guidelines for the preparation of second and subsequent national communications by Parties non included in Annex I to the Convention (non-Annex I Parties).

2. In fulfillment of the above-mentioned mandate, the CGE examined initial national communications submitted to the secretariat. To date, the CGE has presented two reports[1] to the Subsidiary Body for Implementation (SBI) containing recommendations on financial and technical support for the preparation of national communications of non-Annex I Parties.

B. Scope of the note

3. This document contains 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 for the improvement of the process of preparation of national communications by non-Annex I Parties.

4. For this report, the CGE examined 41 initial national communications[2] that were submitted to the secretariat between May 2002 and April 2005. The previous reports of the CGE contained the outcomes of the examination of 81 initial national communications submitted by non-Annex I Parties as of April 2002. The CGE also considered information contained in the sixth compilation and synthesis of initial national communications of non-Annex I Parties contained in document FCCC/SBI/2005/18 and Add.1–6 and Add.3/Corr.1.

C. Possible action by the Subsidiary Body for Implementation

5. The SBI may wish to take note of the information presented in this document 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

6. In order to facilitate the work of the CGE, including the examination of 41 initial national communications, the members were grouped into 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 fourth and fifth meetings of the CGE and, after the meetings, made use of the secretariat's listserver to exchange views on the outcomes of the examinations.

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[1] See documents FCCC/SBI/2001/15 and FCCC/SBI/2002/15.

[2] Albania, Bangladesh, Bahrain, Belize, Benin, Brazil, Cambodia, Cameroon, Central African Republic, China, Comoros, Democratic People's Republic of Korea, Djibouti, Dominican Republic, Eritrea, Gabon, Gambia, Guinea, India, Iran (Islamic Republic of), Kenya, Kyrgyzstan, Madagascar, Malawi, Malta, Mauritania, Namibia, Nepal, Nigeria, Pakistan, Palau, São Tomé and Príncipe, Solomon Islands, South Africa, Sudan, Tajikistan, The former Yugoslav Republic of Macedonia, Uganda, United Republic of Tanzania, Viet Nam, Zambia.

7. The CGE examined the following sections contained in the initial national communications of 41 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 41 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 the guidelines and of 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 national GHG inventories preparation

8. Most of the 41 initial national communications examined used 1994 as the base year, and a few used 1990. Some initial national communications estimated emissions for several years. The base year of 2000 has been proposed for non-Annex I Parties for their second national communications except for the least developed countries, which can estimate their national GHG inventories for years at their discretion (decision 17/CP.8, annex, para. 7).

9. Most of the initial national communications examined reported difficulties in obtaining reliable national activity data from national statistics and country-specific emission factors from national or regional studies. A few initial national communications identified this as a future task for improving the national GHG inventories. Most of the initial national communications examined used the Intergovernmental Panel on Climate Change (IPCC) default emission factors, although some Parties developed their own national emission factors. One Party also reported using emission factors of other countries in the region.

10. Although the guidelines for preparing initial national communications contained in the annex to decision 10/CP.2 did not require reporting of non-CO_2 emissions from agricultural soils and land-use change and forestry, almost all (40) of the initial national communications examined reported on methane (CH_4) and nitrous oxide (N_2O) emissions. One Party reported only on carbon dioxide (CO_2). Parties, however, reported difficulties in obtaining reliable activity data and appropriate emission factors for these gases. In view of the importance of such emissions in national GHG inventories in the context of identifying GHG abatement options and future mitigation planning, the CGE recommends establishing or maintaining and/or improving continuous data collection systems covering those activity data.

11. Many initial national communications reported institutional arrangements for the preparation of GHG inventories, but only a few Parties identified the need for support to strengthen institutions. Three Parties mentioned recourse to consultants, one specifying that they be local. This issue reinforces the

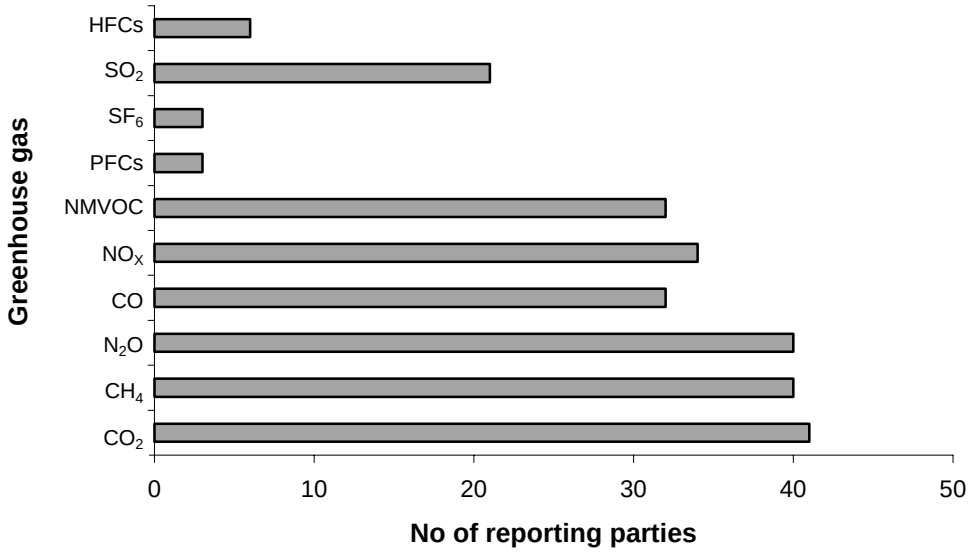
need to build national capacity through training, such as the CGE regional hands-on training workshop on GHG inventories.

2. Assessment of difficulties in using the guidelines

12. Although in preparing their initial national communications non-Annex I Parties were required to follow the guidelines adopted at COP 2 (annex to decision 10/CP.2), a majority (90 per cent) of the initial national communications reported that they used the *Revised 1996 IPCC Guidelines for National Greenhouse Gas Inventories* following the guidelines adopted at COP 8 (annex to decision 17/CP.8). Differences in reporting tables in the two approaches make comparison and aggregation of emission data difficult. The adoption of decision 17/CP.8 with the new reporting tables is expected to harmonize the reporting of GHG inventories.

13. Most national communications dealt with all six GHGs and precursor gases, but only a few of them quantitatively estimated F-gases (see figure 1). A few Parties undertook future projections of emissions, using various methods and development scenarios, which is a major undertaking. However, it would be preferable for reporting on projections of emissions to be included in the section on abatement analysis, of which it is an essential component.

Figure 1 - GHGs and precursor gases reporting pattern



3. Analytical and methodological issues relating to national GHG inventories

14. Only two Parties reported the use of the IPCC GHG inventory software, which facilitates preparation and reporting of national GHG inventories. Five Parties explicitly referred to the use of the *IPCC Good Practice Guidance and Uncertainty Management in National Greenhouse Gas Inventories* (hereinafter referred to as the IPCC good practice guidance). In 2005, the UNFCCC secretariat produced new software for national GHG inventories for non-Annex I Parties, which included extended functions that address the reporting requirements contained in decision 17/CP.8. The CGE encouraged the non-Annex I Parties to use this software as far as possible.

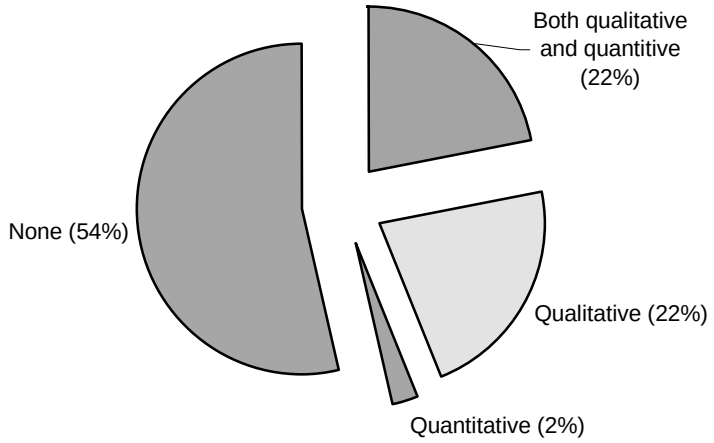
15. Most Parties estimated CO_2 emissions from the energy sector using the IPCC reference and sectoral approaches, but not all reported on the discrepancies between the two approaches. Reported discrepancies ranged from 0.2 to 35 per cent. To address this problem, it is recommended that the results

be compared after emissions have been computed by the two different approaches. Such an analysis would indicate the quality and appropriateness of data and emission factors used.

16. About half of the reporting Parties undertook the analysis of international bunker fuels, with some separating marine and aviation emissions. For the other Parties, difficulties in obtaining reliable activity data were the main constraint. Nearly half of the reporting Parties undertook assessment of uncertainties. One Party reported quantitatively on uncertainties for all reported sectors, whereas 22 per cent of the communications addressed uncertainties in a qualitative manner, and another 22 per cent reported in both ways depending on the sector (see figure 2).

17. Thirty-one Parties estimated aggregated GHG emissions using global warming potentials (GWP). One Party questioned the validity of the GWP concept in estimating its GHG emissions. Without any prejudice to the legal or scientific significance of GWPs, it is worthwhile noting that aggregation is required in the Key Category Analysis and uncertainty estimation of the IPCC good practice guidance; this would contribute to the improvement of national GHG inventories.

Figure 2. Number of Parties undertaking uncertainty assessments in national greenhouse gas inventories

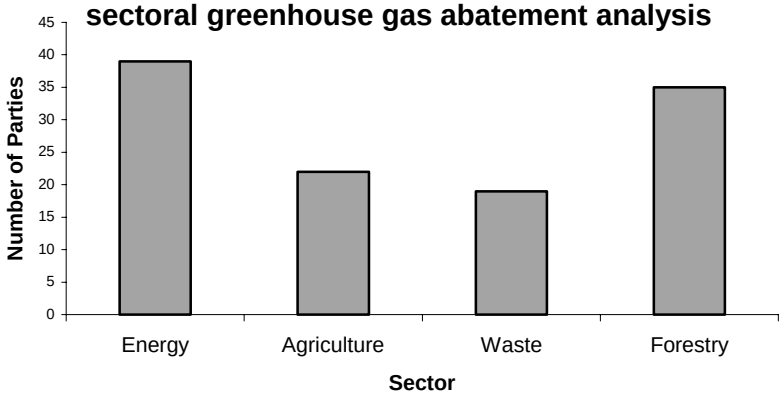


B. Greenhouse gas abatement analysis

1. Assessment of technical problems and constraints in GHG abatement analysis

18. The numbers of Parties reporting measures or options for GHG abatement in the energy, agriculture, waste and forestry sectors are shown in figure 3. The CGE observed that in most cases Parties did not undertake a comprehensive assessment of GHG abatement measures. Some Parties restricted their analysis to identification of abatement options only. The integration of environmental, social and economic impacts of abatement options was not reported, and there was a similar lack of analysis across sectors in the economy.

Figure 3. Number of Parties undertaking sectoral greenhouse gas abatement analysis



19. In the energy sector, 80 per cent of the initial national communications examined identified GHG abatement measures or options relating to the residential sector, followed by 71 per cent for the transport sector, 61 per cent for the industrial sector and 37 per cent for the commercial subsectors. Seven per cent reported general information on the potential GHG measures without specifying the subsectors. Thirty-six out of the 41 initial national communications reported GHG abatement measures in the area of renewable energies and five reported on other non-fossil fuel sources such as nuclear energy.

20. Future emissions estimates, including baseline projections, were reported in many cases: 23 Parties for the energy sector, 16 Parties for forestry and 6 Parties for agriculture and waste. The projection periods and the sectors covered also varied. Parties indicated that more in-depth studies are required for more comprehensive and detailed cost–benefit analyses to assess the feasibility of these options, to evaluate the benefits, and to identify the entities that will bear these costs or accrue the benefits.

21. In its review of the information on GHG abatement options, the CGE noted that capacity-building processes initiated through bilateral and multilateral cooperation have been an important factor in creating and enhancing the analytical capability of non-Annex I Parties to undertake GHG abatement analysis. The level of detail of the analyses and a lack of capacity to conduct these analyses were generally presented as an important constraint in many national communications.

22. Some Parties indicated that some of the reported measures to abate GHG emissions are ongoing and other plans or projects could be implemented to reduce emissions if the necessary resources were made available. However, constraints enumerated in the national communications, relating to funds, methodologies, technology, acceptability, planning, legislative framework, institutional framework and economic incentives, will need to be overcome. Some Parties also mentioned political constraints and other barriers such as the lack of methodologies in languages other than English.

23. Although not required by the guidelines, several Parties presented an assessment of environmental, social and economic impacts of abatement options. Ten Parties reported on social benefits generally without specifying the approach and method used. The national circumstances of a Party could serve as a basis for the appropriate identification and prioritization of potential options and measures that could be implemented to enhance sustainable development and generate social, economic and environmental benefits. Major constraints relating to the availability of data and information have been observed. Gaps in activity data still exist in the energy sector, in forestry and changes in land use, in crops cultivated per area, in crop husbandry practices, in livestock numbers and the weight of animals, and in waste composition and amounts generated. Most Parties reported insufficient institutional capacity in handling data collection and management for abatement analysis.

2. Assessment of using the guidelines for GHG abatement analysis

24. The guidelines for the preparation of initial national communications (decision 10/CP.2) did not provide a detailed direction on reporting information on GHG abatement analysis. Although the guidelines contained in the decision 17/CP.8 are not mandatory, some Parties used them to assess GHG abatement options. Although the use of the new guidelines has improved the way Parties should report on programmes containing measures to mitigate climate change, gaps still exist in the guidelines on preparation of reports on GHG abatement measures, such as in determining the timelines. Prior to embarking on the GHG abatement analysis, Parties could consider improving their technical capacity, through training of personnel on appropriate methods to be used for which Parties may wish to avail of particular method-based training provided by the NCSP and bilateral and multilateral agencies.

25. National GHG inventories served as a starting point for determining abatement options, which was thus assessed in relation to the areas with the highest emissions. The examination of national communications indicated that all Parties have analysed GHG abatement to meet the objective of the Convention. The CGE observed that in most cases Parties did not undertake a comprehensive assessment of their GHG abatement measures. The variations in analysis may have been due to the lack of a common framework with well-detailed guidelines for reporting on abatement analysis.

26. The level of reporting on programmes containing measures for the abatement of GHG emissions and the enhancement of removals by sinks varied considerably among Parties from simple to more detailed analysis. Some Parties presented options relating to GHG emission reductions, whereas others provided information limited to possible measures that would lead to abatement. The more detailed assessments reported on methodologies and scenarios used to project emissions and quantify the impacts of potential measures. Some Parties proceeded further with their assessments and presented projects that could be implemented to reduce GHG emissions or enhance removals by sinks, and also calculated costs of project implementation.

3. Analytical and methodological issues on GHG abatement analysis

27. Methodologies used for the assessments varied between Parties and sectors. Fifteen Parties used models for the energy sector and eight used them for the forestry sector. The majority of Parties did not report on the method used in the agriculture and waste sectors, except to state that expert judgement was used in a few cases. Parties that used models to project future emissions most frequently relied on models such as Long-range Energy Alternatives Planning System (LEAP), Energy and Power Evaluation Program (ENPEP) and Market Allocation Model (MARKAL) for the energy sector. Other models reportedly used were Greenhouse Gas Costing Model (GACMO), Comprehensive Mitigation Assessment Process (COMAP), Energy Flow Optimization Model-Environment (EFOM-ENV), Model for Energy Demand Evaluation Software (MEDEE-S), Wien Automatic System Planning (WASP), Valorization of Water (VADRAGUA), Carbon Pasture Agriculture Total Harvesting (COPATH), OPTIM and MADE. Alternative methods reported were statistical analyses and expert judgement. There is a need to identify more reliable methods for sectors other than energy and make them available to Parties for use during the preparation of the second national communications. This will ensure more extensive analyses and allow for comparability of information in the national communications.

28. The analysis of the cost of abatement options, where this was reported, also varied among Parties. Some Parties provided cost-benefit analyses of abatement options, based on the use of LEAP, GACMO and COMAP models, on the spreadsheet method or on expert judgement only. Many Parties reported on difficulties of using the models because of limited institutional capacity and appropriate databases.

C. Vulnerability and adaptation assessments

1. Assessment of technical problems and constraints in vulnerability and adaptation assessments

29. For some non-Annex I Parties, the preparation of technical studies for vulnerable sectors and vulnerability and adaptation assessments was constrained by the fact that many of the methodologies, and in particular simulation models and their supporting documentation, were available only in English. This made it considerably difficult for some experts to use and apply these methods and models.

30. Some Parties still stressed the low level of priority granted to vulnerability and adaptation issues by policymakers at the highest levels of government, whereas others reported that stakeholders recognized adaptation as a high priority issue. Most Parties reported that they were unable to complete vulnerability assessments in all sectors due to inadequate financial resources, and lack of capacity and data, especially to run models. A few Parties proposed the establishment of comprehensive programmes funded by the Global Environment Facility (GEF) to assess vulnerability and to develop adaptation strategies.

2. Assessment of using the guidelines

31. All Parties reported on their vulnerability and adaptation in their national communications. The assessments varied in level and scope, because of differing capabilities. Some Parties undertook detailed quantitative assessments of both vulnerability and adaptation in a limited number of subsectors, whereas in most cases the assessment was only qualitative. The quality of the assessment varied between sectors for the same Party and between Parties relative to their capabilities, data and resources available. The sectors covered were water resources, agriculture, coastal zones and marine ecosystems, fisheries, human health, tourism, wildlife, rangelands, infrastructure, terrestrial ecosystems and biodiversity. Some Parties interpreted the results of such analysis through integrated assessment, for example, at the basin level or at the coastal zones.

32. Examination of the information on vulnerability and adaptation assessment revealed that all non-Annex I Parties were vulnerable to climate change. Several Parties reported that they were already experiencing the impacts of climate change through increases in the frequency and intensity of floods, droughts, saltwater intrusion and desertification. Most of the Parties identified adaptation to climate change as a major issue and included a list of potential adaptation options in their national communications. In considering the types of measures for adaptation, some Parties provided detailed information, for example on construction of embankments, water storage, increasing drainage, restoration of channels, and crop diversification and irrigation. Only a few Parties presented comprehensive adaptation measures, whereas most Parties did not evaluate, prioritize and cost their adaptation options.

3. Analytical and methodological issues

33. Most Parties did not clearly specify the methods and approaches used. Some applied the IPCC's seven step framework for climate impact assessment[3] and/or the United Nations Environment Programme Handbook,[4] whereas others reported statistical, historical, downscaled and national methods, and expert judgement. The CGE noted that Parties generally reported a lack of the data required as inputs to impact models and assessments. Parties also reported on difficulties relating to lack of national capacity/expertise to develop and/or use socio-economic scenarios, as well as lack of financial resources for assessment work. Some Parties also reported a lack of completeness in the data series, and that they were unable to use the World Meteorological Organization's normal analysis period of 1961–1990.

[3] IPCC Second Assessment Report: Climate Change, 1995.
[4] Handbook on Methods for Climate Change Impact Assessment and Adaptation Strategies, 1998.

34. Many Parties favoured the use of general circulation models (GCMs) for generating scenarios of climate change to feed into the impact and adaptation assessments. Some Parties had difficulties in selecting and testing a GCM that would adequately fit their national circumstances. The resolution of the GCMs remained a major obstacle for many Parties, notably the small island developing States. The use of MAGICC/SCENGEN was also generally reported as being unsatisfactory due to its inappropriate downscaling methods and output. This information could help in developing future capacity-building programmes.

35. Most Parties focused on their vulnerability in the agriculture and water resources sectors as they are of prime importance in addressing the basic needs of the population, especially when the population relies on subsistence agriculture. Some Parties analysed impacts of climate change on agricultural crops by using the Decision Support System for Agro-technology Transfer (DSSAT), a software package that integrates crop growth models with weather and soil data. National models were used in many cases to assess the vulnerability of water resources and of a few other sectors.

D. Other information relevant to the implementation of the Convention

1. Research and systematic observation

36. All Parties reported on activities relating to research and systematic observation, but the extent of reporting varied. Some Parties devoted a chapter to this issue, others restricted their reporting to a section of a chapter, and others provided information sparsely and scattered in the national communication. In most cases, Parties provided information on the status of national programmes and on activities relating to meteorological, atmospheric and oceanographic research and observation. Parties are encouraged to report more systematically and extensively as appropriate on observation systems and research.

37. Most Parties reported on the level of their participation in global research and systematic observation systems, and gave assessments of their needs and priorities in this area. Some Parties provided valuable information on existing research programmes on GHG abatement, adaptation to the impacts of climate change and development of emission factors and activity data. Although the quality and scope of reporting varied among Parties, information provided was generally adequate for assessing the technical difficulties and constraints faced by Parties.

38. Some Parties indicated that participation in global observation networks, such as the Global Climate Observing System (GCOS), the Global Terrestrial Observing System, and the Global Ocean Observing System has improved their capability to cooperate with other developing and developed countries and with other national and international research organizations.

39. Nearly all Parties reported the need for assistance to undertake and implement climate change research activities in accordance with national priorities, to support capacity to develop and share high resolution climate change scenarios and models, and to support cooperation and links at the regional and international levels. The CGE wishes to further consider how it could contribute to the work of the Convention in research and systematic observation, in particular, assisting Parties to improve the quality and consistency of reporting.

40. The CGE noted that almost all 41 initial national communications examined continued to highlight limited capacities to undertake research and systematic observation activities such as accessing, analysing and managing data relevant to climate change (for example impact assessment, detection and early warning of extreme weather events and climate prediction). This is reportedly due to a lack of financial resources and human capacities and capabilities, as well as limited technical support. Few Parties reported ongoing research programmes relating to climate change.

41. Most Parties reported sparingly on research. Even for those who dedicated a chapter to this issue, the information was mostly not clear enough to assess the objectives and performance of ongoing and/or future programmes. Many Parties particularly stressed the importance of research: to derive better emission factors for land use, land-use change and forestry and waste sectors; to develop cost-effective GHG abatement options; and to conduct reliable vulnerability assessments and develop adaptation options in agriculture, water resources and health.

42. All Parties reported on the gaps and constraints faced at the national level to adequately address research and systematic observation on issues relating to climate change. In this respect, there was much commonality. Parties reported that the quality of existing networks was deteriorating, and one of the key constraints was outdated instrumentation. Parties also noted that national and regional meteorological, atmospheric, hydrological and agricultural observation networks required rehabilitation, strengthening and expansion to improve data quality and coverage. Some Parties reported having used top-up funds for technology needs assessment to address methods for closing data gaps in time series of meteorological data for the period 1960–2000. Many Parties also indicated that the data management systems were outdated, which undermines the ability to access, process and archive important data.

43. Examination of the initial national communications indicated that institutional arrangements were almost non-existent for research and that systematic observation was usually the responsibility of national meteorological services.

2. Education, training and public awareness

44. All Parties described the importance of education, training and public awareness in promoting the implementation of 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 in formal and non-formal educational systems, the public at large, policymakers, non-governmental and community-based organizations, media, industry, and academic and research institutions, are key to ensuring a holistic approach to building awareness on climate change issues.

45. Most Parties dedicated a full chapter to education, training and public awareness, whereas others covered it as parts of other sections of the national communication. The quality and scope of reporting varied widely among Parties. On examining the national communications it was not possible to distinguish clearly between ongoing and planned activities and programmes.

46. Most Parties provided information on general environmental issues incorporated in the formal educational programmes at different levels. In few cases, climate change issues were reported to be covered in tertiary education curricula, while at the primary and secondary levels coverage was reported as being poor. Parties recognized the need to introduce climate change into the curricula at all levels of the education system.

47. In general, Parties noted the need for training national experts in the areas of national GHG inventories, vulnerability and adaptation assessments, and mitigation analysis. Parties also highlighted the need to continue the training programmes so as to maintain sufficient capacity for improving future reporting and to carry out their obligations under the Convention effectively. Most Parties highlighted the need to train local scientists and technical and managerial staff in order to incorporate climate change issues in everyday life.

48. Parties recognized that creating public awareness on climate change is crucial and noted that the current level of awareness is still very low. It was recognized that the participation and collaboration of non-governmental organizations and local communities could prove useful for awareness campaigns. Many Parties reported that the process for the preparation of initial national communications positively

contributed to awareness-raising among relevant stakeholders and that there is a need to strengthen and maintain this process. Most Parties reported constraints to implementing effective education, training and public awareness programmes. The most recurrent problem was the lack of appropriate materials, sometimes in the required language, and limited financial, technical and human resources.

49. For most Parties the lack of trained scientific and technical personnel, and of policymakers, in the field of climate change, is still a constraint to the effective implementation of the Convention. However, concrete actions and future needs to address this constraint were rarely well elaborated. The integration of climate change into development plans is viewed as an essential step towards achieving the objective of the Convention.

3. Technology transfer

50. Some Parties provided information on activities relating to the transfer of and access to environmentally sound technologies. They also addressed the enabling environment, as well as information on technology needs and constraints. Some non-Annex I Parties are presently undertaking their technology needs assessments with the support of the GEF, United Nations Development Programme or United Nations Environment Programme under top-up activities. This exercise should prove complementary to efforts deployed to date by non-Annex I Parties to report on this issue in their national communications.

51. Reporting on technology transfer was sporadic, and the quality and coverage of information generally limited, which makes it difficult to draw any viable conclusions on the needs and constraints of Parties. Although some Parties prioritized their technology needs, it was not apparent which types of tools were used to conduct such an assessment. Information was also limited to international and regional programmes and mechanisms that may have facilitated technology transfer. That said, it is important to note that the lack of information may reflect the fact that the guidelines contained in decision 10/CP.2 did not provide sufficient guidance on the preparation of technology transfer aspects of initial national communications.

4. Information sharing and networking, and institutional arrangements

52. The CGE noted that the development of information systems is an important part of preparing national GHG inventories, vulnerability and adaptation assessments and mitigation analyses. The group also recognized that networking helps to provide access to updated information, and promotes the exchange of experiences on these issues. Many Parties reported that such exchange of information and networking could still be improved with the provision of appropriate human and financial resources, and of additional data and information.

53. Parties also noted the importance of establishing national environmental information systems to facilitate the preparation of national communications, in particular for the preparation of good quality national GHG inventories, on a regular basis. Parties stressed the importance of integrating climate change considerations into national development planning processes. Many Parties found that one of the major constraints was the lack of appropriate institutional arrangements and of clarity of roles and responsibilities of experts and institutions in carrying out the technical studies relating to the preparation of the national communication; this affected several important activities such as data collection, information exchange and networking among countries or regions and project personnel.

54. Some Parties reported that their activities were constrained by the lack of effective coordination among the different ministries involved and limited awareness among policymakers. The national climate change committees responsible for the preparation of national communications in many countries were neither active nor operational, and many were not granted the necessary legal and institutional authority to effectively carry out their work and therefore were not sufficiently motivated to implement

their tasks in a timely manner. They also lacked human capacity to ensure a minimum level of active participation in, and monitoring of, technical studies to review and endorse project outputs and launch concrete follow-up actions. In some Parties, there were delays in project implementation because of a high turnover of technical staff, political instability and/or a change in project leadership within the institutions responsible for the preparation of the national communication.

55. The guidelines in the annex to decision 10/CP.2 do not provide specific guidance for reporting on information and networking. However, Parties noted that some networking activities had been taking place at the national, subregional and regional levels, and indicated that the promotion and enhancement of regional networking initiatives are important in facilitating exchange of information on good practices. They also pointed out that networking among NGOs contributes to the exchange and dissemination of information that help improve the quality of national communications. Promotion of cooperation among centres of excellence in neighbouring countries is considered essential.

56. Parties reported the need to enhance access to information, and for relevant expertise in all areas to assist in addressing problems linked to the preparation of national communications. 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 found that weak institutional arrangements and the lack of human resources and capacities for conducting systematic data collection, together with the absence of universities and/or research centres working on climate change issues, particularly in small and poor countries, made it difficult to implement some of the activities relating to the preparation of national communications.

5. Capacity-building

58. Most Parties acknowledged that the preparation of initial national communications has contributed to building national capacities. Many stressed, however, that these programmes should be enhanced to provide sufficient trained personnel in the various areas for more comprehensive reporting in the second or subsequent national communications. Parties emphasized the need to enhance the capacity of their national focal points to effectively implement the Convention. They stressed the fact that their governments have limited resources to address climate change issues and that these limitations were not well addressed by external support provided for climate change activities.

59. Capacity-building needs were considered in all initial national communications examined and were noted as being crucial for the implementation of the Convention. Reporting level and scope varied widely, from general information to very specific needs. Many Parties indicated the need for assistance to enhance national capacities for better policy formulation and planning, or the integration of climate change issues into sustainable development. Parties also identified the need for capacity-building to prepare national GHG inventories, to conduct analyses of impacts, adaptation and mitigation, and to identify and implement measures to address climate change.

6. Financial and technological needs

60. According to paragraphs 19 and 20 of the annex to decision 10/CP.2, Parties may describe the financial and technological needs and constraints associated with the communication of information, and may include a description of financial and technological needs associated with activities and measures envisaged under the Convention. All Parties reported on problems and constraints of a financial and technological nature that affected their capacity to prepare their national communications. The type, extent and nature varied across Parties, but common among the 41 initial national communications examined were the effect on monitoring and assessment of the adverse impacts of climate change on key

sectors such as agriculture, water, coastal zones, health and biodiversity, and the upgrading of associated data management systems.

61. The 41 initial national communications examined also identified similar problems/constraints encountered by other non-Annex I Parties in preparing their initial national communications, as contained in the report of the CGE at SBI 17 (FCCC/SBI/2001/15). The constraints identified include the lack of data (i.e., availability, accessibility and reliability) in all relevant areas of the national communications. This problem was exacerbated by insufficient funds and technical capacity and expertise to access, collect, analyse, manipulate and manage data and the databases necessary to conduct the assessments and analyses of GHG emissions, GHG abatement options and vulnerability and adaptation.

62. Most Parties indicated that the provision of financial resources and the transfer of technologies by developed countries are crucial for implementation of the Convention. Hence, 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.

63. Due to competing needs for limited national resources, Parties reported that they cannot ensure the continued existence of the country teams once the international funds are exhausted. This not only undermines efforts to maintain capacities built in the preparation of initial national communications but also hinders the process of preparing the national communications on a continuous basis. Many Parties indicated the need for additional financial and technical resources to develop a critical mass of human resources to implement strategic programmes to address climate change issues in a multidisciplinary and effective manner.

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

64. In light of the highly varying level and scope in reporting observed in the 41 initial national communications produced on the basis of the guidelines for preparation of non-Annex I Party national communications, the CGE recommends the following:

National greenhouse gas inventories

(a) To make selective use of the IPCC good practice guidance when appropriate, as it contains information that is also useful for non-Annex I Parties, such as prioritized allocation of resources to inventory preparation using Key Category Analysis, and effective inventory compilation processes by decision trees;

(b) To exert additional efforts in estimating emissions from the F-gases whenever relevant, in accordance with decision 17/CP.8, as many of these gases have very large global warming potentials and their mitigation might play a major role in future climate mitigation measures;

(c) To develop a user-friendly format for data collection, database development and data management given that most Parties lacked activity data and emission factors and are still facing problems and constraints in compiling a comprehensive GHG inventory;

(d) To report in a more detailed manner the use of methodologies, tools and models as a first step in addressing their technical gaps and constraints. Similarly, reporting should address the appropriateness of default emission factors and the ones developed on a national basis so as to allow for improvement and adoption. Parties are encouraged to adopt and use the GHG software developed by the UNFCCC secretariat to facilitate

compilation and reporting. Additionally, the IPCC Emission Factor Database (EFDB) should be used when assessing the appropriateness of default emission factors. The CGE has noted in its previous reports that continuous institutional arrangements for updating and maintaining inventory-relevant data would ensure efficient and better inventory preparation;

(e) To develop and maintain a continuous system for storing relevant activity data and to submit to the EFDB their national emission factors so that future national inventories can use such emission factors. As indicated in the initial national communications, Parties also placed emphasis on the transport sector. As this sector is not adequately covered, emphasis should be given to including this sector in the future training programme for the preparation of non-Annex I national communications and to developing methods and/or guidelines for analysis;

Greenhouse gas abatement analysis

(f) To actively involve experts from the different sectors concerned, such as economists, project developers, as well as policymakers and politicians in identifying GHG abatement options to guarantee that government plans are taken into consideration. It also proposed that institutions involved in the preparation of national communications should be strengthened to ensure comprehensive analysis and complete reporting;

(g) To identify and produce tools and models to analyse the agriculture and waste sectors and make them available to non-Annex I Parties. The provision of a simple format for reporting, covering the different sectors, could prove very valuable to experts of non-Annex I Parties. This would improve the reporting of information while ensuring completeness, transparency and comparability;

(h) To establish and maintain institutional arrangements involving ministries, organizations and stakeholders to ensure that GHG abatement measures identified are consistent with national sustainable development goals;

Vulnerability and adaptation assessment

(i) To report on the methodologies and tools provided and used, and to comment on their appropriateness for their national context and on improvements required. Parties are encouraged to undertake in-depth vulnerability assessments accompanied by the adaptation assessment, rather than undertaking superficial analyses, so as to facilitate and promote the adoption of reliable measures within development programmes to cope with climate change. Parties are also encouraged to evaluate the multitude of resources available and to tailor their assessments accordingly;

Research and systematic observation

(j) Parties are to develop national capacity for systematic observation and research. They are also encouraged to develop regional cooperation, including networking of institutions, relating to systematic observation and research so as to pool resources for enhanced data quality, availability and application. Regional cooperation is even more important when a number of Parties have common resources, such as a shared river basin;

(k) To strengthen reporting on coverage and quality of systematic observation infrastructure as well as participation in, and contribution to, activities and programmes on regional and global research networks and observing systems. Parties are encouraged to clearly identify and report on their research needs for various areas for consideration and inclusion in future programmes;

Education, training and public awareness

(l) To report as extensively as possible on education, training and public awareness issues and to differentiate between ongoing and planned activities;

(m) To develop and exchange educational modules on climate change for inclusion in the curricula of non-Annex I Parties. Networking and sharing of training and public awareness materials should be encouraged among non-Annex I Parties;

Technology transfer

(n) To improve reporting on technology transfer activities, in particular in the areas of technology needs and needs assessment, enabling environments and mechanisms for technology transfer. Successful technology transfer relies on in-depth assessments of mitigation and adaptation options. Parties are encouraged to include in their assessments an analysis of technology options that could be adopted;

Information sharing and networking and institutional arrangements

(o) To consider institutional arrangements that involve stakeholders in the preparation of national communications. At the early stage of preparation of national communications Parties are encouraged to set up national databases of the different components of the communications and establish a facility, such as networking, to share this information;

Capacity-building

(p) To develop and maintain national websites relating to capacity-building through the acquisition and maintenance of hardware and software. This would enhance Parties' access to the internet and enable better access to climate change materials, including those of the IPCC, the UNDP/UNEP/GEF National Communications Support Programme, the UNFCCC secretariat and others;

Financial and technological support programmes

(q) To enhance national regional and international collaboration on systematic observation. Participation in GCOS Implementation Plan and Global Earth Observation System of Systems initiatives is particularly valuable;

(r) Parties require technical and financial assistance, in particular for data acquisition, data management systems, improving their monitoring capabilities, and improving the quality and coverage of meteorological, atmospheric, hydrological and agrometeorological networks, as well as for research on other areas of the national communications;

(s) 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 enhance South–South and North–South cooperation.

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