

## **Decision 9/CP.2**

### **Communications from Parties included in Annex I to the Convention: guidelines, schedule and process for consideration**

*The Conference of the Parties,*

*Recalling* the relevant provisions of the United Nations Framework Convention on Climate Change, in particular, Articles 4, 5, 6, 7.2, 9.2(b), 10.2, 11 and 12,

*Recalling* its decision 2/CP.1 on review of first communications from the Parties included in Annex I to the Convention, decision 3/CP.1 on preparation and submission of national communications from the Parties included in Annex I to the Convention and decision 4/CP.1 on methodological issues,

*Having considered* the relevant recommendations of the Subsidiary Body for Scientific and Technological Advice and those of the Subsidiary Body for Implementation,

*Recognizing* that anthropogenic emissions and removals by sinks of all greenhouse gases should be reported in a complete, transparent and comparable way that avoids double-counting or incomplete counting,

1. *Requests* the Subsidiary Body for Scientific and Technological Advice to consider, at its fourth session, any other possible additional revisions to the guidelines arising from, *inter alia*, any modifications to the Intergovernmental Panel on Climate Change Guidelines for National Greenhouse Gas Inventories;

2. *Requests* the Subsidiary Body for Scientific and Technological Advice to consider methodological issues relevant to national communications and, in particular, at its fourth session, to address those issues discussed in FCCC/SBSTA/1996/9/Add.1 and Add.2; and, if relevant conclusions on such issues can be drawn, to revise further the guidelines for the preparation of national communications as appropriate;

3. *Decides* that Parties included in Annex I to the Convention (Annex I Parties) should use the revised guidelines contained in the annex to this decision for the preparation of their second communications, taking into account decisions of the Subsidiary Body for Scientific and Technological Advice at its fourth session and, unless modified or replaced, for subsequent communications;

4. *Requests* Annex I Parties to submit to the secretariat, in accordance with Article 12.1 and 12.2 of the Convention:

(a) A second national communication<sup>1</sup> by 15 April 1997. For those Parties which were due to submit the first communication in 1996, an update of this communication is to be submitted by the same date; second national communications by Parties with economies in transition should in principle be submitted not later than 15 April 1998;

(b) National inventory data on emissions by sources and removals by sinks on an annual basis, by 15 April of each year, following the principles contained in decision 3/CP.1;

5. *Decides* that the four Parties that have invoked Article 4.6 of the Convention, requesting in their first communications flexibility to use base years other than 1990, be allowed this degree of flexibility, as follows:

- Bulgaria: to use 1989 as a base year;
- Hungary: to use the average of the years 1985 to 1987 as a base year;
- Poland: to use 1988 as a base year;
- Romania: to use 1989 as a base year;

6. *Requests* the Subsidiary Body for Implementation to consider any additional requests on the basis of Article 4.6 of the Convention and to take decisions as appropriate on its behalf, and to report thereon to the Conference of the Parties;

7. *Requests* that the Annex I Parties with economies in transition invoking Article 4.6 of the Convention in the implementation of their commitments should do so by explicitly indicating the nature of this flexibility (e.g., choice of a base year other than 1990, use of the revised guidelines for the preparation of national communications, schedule of submission of national inventory data other than indicated in paragraph 4 (b) above, etc.), and should state clearly the special consideration they are seeking and provide an adequate explanation of their circumstances;

8. *Decides* that the review process be continued in accordance with the relevant decisions of the Conference of the Parties;

9. *Requests* the secretariat to apply the procedures for the review, including in-depth reviews, as defined in decision 2/CP.1, to second national communications from Annex I Parties; the in-depth reviews are to be completed before the fifth session of the Conference of the Parties;

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<sup>1</sup> This term includes communications from the regional economic integration organization included in Annex I to the Convention.

10. *Requests* the secretariat to prepare the documentation on the results of the review of second national communications, including compilation and synthesis and/or other reports, according to schedules to be adopted by the subsidiary bodies. A first compilation and synthesis of second national communications from Annex I Parties should be available for consideration by the Conference of the Parties at its third session;

11. *Urges* those Annex I Parties that have not yet submitted their national inventory data on emissions by sources and removals by sinks, as requested by decision 3/CP.1, to do so as soon as possible;

12. *Concludes*, with respect to the reporting of national communications by Annex I Parties, that:

(b) Annex I Parties are fulfilling their Article 4.2(b) commitments to report in detail on national policies and measures on the mitigation of climate change;

(c) Annex I Parties are fulfilling their Article 12.3 commitments by reporting on their commitments regarding the transfer of technology and the provision of financial resources;

13. *Concludes*, with respect to the implementation of the Convention by Annex I Parties, that:

(a) Annex I Parties are fulfilling their Article 4.2 commitments to implement national policies and take corresponding measures on the mitigation of climate change but that, according to available information, for many Annex I Parties urgent further actions will be needed to return greenhouse gas emissions to their 1990 levels by 2000;

(b) The challenges which Annex I Parties currently face in meeting the aim to return greenhouse gas emissions to their 1990 levels by 2000, and the efforts being made to address these challenges, will be relevant for the negotiations in the Ad Hoc Group on the Berlin Mandate on commitments for the post-2000 period;

(d) There is a need to address the concern expressed by some Parties that Parties included in Annex II to the Convention (Annex II Parties) are falling short of their commitments related to the transfer of technology and the provision of financial resources, keeping in mind that other Parties noted that some Annex II Parties are providing bilateral contributions and that all Annex II Parties contribute to the Global Environment Facility, and noting that these Parties are requested to enhance the reporting on these commitments through applying the revised guidelines contained in the annex to this decision.

*8th plenary meeting  
19 July 1996*

## **Annex**

### **REVISED GUIDELINES FOR THE PREPARATION OF NATIONAL COMMUNICATIONS BY PARTIES INCLUDED IN ANNEX I TO THE CONVENTION**

1. The guidelines for the preparation of communications by Parties included in Annex I to the Convention (Annex I Parties) have three principal purposes:

(a) To assist Annex I Parties in meeting their commitments under Articles 4 and 12 of the Convention;

(b) To facilitate the process of considering the national communications, including the preparation of useful technical analysis and synthesis documentation, by encouraging the presentation of information in ways that are consistent, transparent and comparable; and

(c) To ensure that the Conference of the Parties has sufficient information, in accordance with Article 4.2(d), to carry out its responsibilities to review the implementation of the Convention and the adequacy of the commitments in Article 4.2(a) and (b).

#### **Coverage**

2. In accordance with Articles 4.1(j) and 12.1(b), a communication should address the full range of a Party's actions to implement all its Convention obligations, including those relating to adaptation, research, education and other actions, in addition to those to limit emissions and enhance sinks. With regard to Annex II Parties, this would include measures to implement Article 4.3, 4.4 and 4.5.

3. In accordance with Articles 4 and 12, a communication should address all anthropogenic emissions and removals of all greenhouse gases not controlled by the Montreal Protocol.

#### **Cross-cutting issues**

4. Quantitative data related to inventories and projections of greenhouse gas emissions and removals should be presented on a gas-by-gas basis in units of mass (Gg) with emissions by sources listed separately from removals by sinks, except in cases where it is technically impossible to separate information on sources and sinks in the area of land-use change and forestry.

5. In addition to communicating emissions in units of mass, Parties may choose also to use global warming potentials (GWPs) to reflect their inventories and projections in carbon dioxide-equivalent terms, using information provided by the Intergovernmental Panel on Climate Change (IPCC) in its Second Assessment Report. Any use of GWPs should be based

on the effects of the greenhouse gases over a 100-year time horizon. In addition, Parties may also use other time horizons.

6. Taking into account the provisions of Article 4.2(b), the year 1990 should be the base year for inventories<sup>a</sup>. The provisions of Article 4.6 are relevant in this context for the Parties included in Annex I undergoing transition to a market economy, and those Parties in their communications should propose to the Conference of the Parties the kind of flexibility they are seeking pursuant to that Article.

7. The transparency of national communications is fundamental to the success of the process for the communication and consideration of information. This transparency is particularly important for inventories of emissions and removals of greenhouse gases and for projections and assessments of the effects of measures.

8. When national communications present quantitative data related to inventories and projections of greenhouse gas emission and removal levels, the level of uncertainty associated with these data and underlying assumptions should be discussed qualitatively and, where possible, quantitatively.

9. Parties should provide additional relevant background information to the secretariat, if possible, but not necessarily, in a working language of the secretariat. Such information should include documentation on emission factors used, activity data, and other relevant assumptions, as well as technical reports on the projections analysis.

10. When reporting on policies and measures and projections, Parties may refer to the "Methods for assessment of mitigation options" (chapter 27) and appendices 1-4, contained in "Climate Change 1995: IPCC Second Assessment Report, Volume III, Scientific-Technical Analyses of Impacts, Adaptations and Mitigation of Climate Change: Contribution of Working Group II of the IPCC."

#### Inventories

11. Article 12.1(a) requires that communications include a national inventory of anthropogenic emissions by sources and removals by sinks of all greenhouse gases not controlled by the Montreal Protocol. At a minimum, information should be provided on the following greenhouse gases: carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), perfluorocarbons (PFCs), hydrofluorocarbons (HFCs), and sulphur hexafluoride (SF<sub>6</sub>). Parties should also provide information on the indirect greenhouse gases carbon monoxide (CO), nitrogen oxides (NO<sub>x</sub>) and non-methane volatile organic compounds (NMVOCs), and are encouraged to provide data on sulphur oxides. As new gases with significant global warming

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<sup>a</sup> In accordance with the decisions of the Intergovernmental Negotiating Committee for a Framework Convention on Climate Change at its eight session.

potentials are identified, they should be included in the communications. Where methodological or data gaps exist, information should be presented in a transparent manner.

12. If Parties carry out any adjustments to inventory data, for example for climate variations or trade patterns in electricity, these adjustments should be reported in a transparent manner, with clear indications of the method followed. Both adjusted and unadjusted data should be provided.

13. Parties should also provide greenhouse gas inventory information for years subsequent to 1990. Data should be provided for each year (where appropriate, updated) for the period 1990-1994 and, where available, for 1995, for the second national communication. Subsequent national communications should provide data from 1990 and up to three years prior to the submission year, and, if possible, later years. If possible, data should also be provided in an electronic version which is compatible with the requirements of the secretariat.

14. The IPCC Guidelines for National Greenhouse Gas Inventories should be used in estimating, reporting and verifying inventory data. These inventory guidelines offer a default methodology available to any country that wishes to use it. Countries that already have an established and comparable methodology could continue to use that methodology, provided that they include sufficient documentation to back up the data presented. For Parties using the CORINAIR methodology or other "bottom-up" approaches, this would entail providing activity data and disaggregated emission factors as well as details of the correspondence between the IPCC source categories and those of the CORINAIR or other "bottom-up" approach used. Standard tables and formats recommended in the IPCC Guidelines for National Greenhouse Gas Inventories should be used for presentation of data.

15. With regard to possible double counting or non-counting of emissions, Parties should provide a brief description of how feedstocks have been considered in the industrial processes source category of the inventory, in particular in the production of iron and steel and non-ferrous metals, and in the chemical and petro-chemical industry. Parties should also provide a brief explanation of the way in which CO<sub>2</sub> emissions in the waste source category have been considered, in particular indicating whether the IPCC methodology has been followed in excluding CO<sub>2</sub> emissions from organic waste combustion or aerobic decomposition of biogenic products and including emissions from fossil-fuel based products (plastics and hydrocarbons).

16. To ensure transparency, enough information should be provided to allow the reconstruction of the inventory from national activity data, emission factors and other assumptions, and to assess the results. Annex I Parties should follow the IPCC Guidelines for National Greenhouse Gas Inventories with respect to the presentation of methodologies, activity data, emission factors and other assumptions. Standard data tables do not provide the level of detail necessary to enable the reconstruction of an inventory. In this connection,

IPCC worksheet 1.1, or other equivalent documentation, indicating the assumptions used to estimate CO<sub>2</sub> emissions from fuel combustion, in line with the IPCC Reference Approach, should be provided.

17. In providing information on emissions from international aviation and marine bunker fuels, and in accordance with the IPCC Guidelines for National Greenhouse Gas Inventories, Parties should include such data, in a separate category, in their inventories of emissions on the basis of fuel sold and should, as far as possible, not include them in total national emissions.

18. If Parties wish in addition to present their inventory data in other forms, *inter alia*, greenhouse gas emissions per capita, this information could be provided in a section of the national communication dealing with basic data (national circumstances). If possible, it would also be desirable to include some information on historical trends (for example, emissions and removals over the period 1970-1990) so as to put the inventory information in context.

19. In providing information on sequestration and emissions of carbon in the land-use change and forestry sector, as well as in agricultural soils, Parties should provide the information in the worksheets provided in the IPCC Guidelines for National Inventories, or equivalent documentation. Emissions of other greenhouse gases associated with these activities should also be listed, as appropriate. Historical trends should be included where available. Even if Parties do not use the IPCC default methodology, the results should be presented using the IPCC reporting format.

#### Policies and measures

20. Article 12.2 requires Annex I Parties to communicate information on policies and measures they have adopted to implement their commitments under Article 4.2(a) and (b). The national communications should describe all of a Party's policies and measures implemented or committed to that the Party believes contribute significantly to its efforts to reduce emissions and enhance sinks of greenhouse gases. These actions need not have as a primary objective the limitation of greenhouse gas emissions.

21. Parties are also encouraged to provide information on actions implemented by regional and local governments or the private sector, ensuring that double-counting is avoided. However, some aggregation may be appropriate to maximize the utility of such information. The communications could also note policies and measures that have been adopted in the context of international or regional efforts towards coordination, as appropriate, of economic and administrative instruments in accordance with Article 4.2(e)(i).

22. The overall policy context for the policies and measures adopted should be presented. This could include reference to other relevant policies as well as elaboration of national greenhouse gas targets.

23. Communications of policies and measures should be organized by gas and by sector. This should, to the extent possible, be consistent with the categories set out in the IPCC Guidelines for National Greenhouse Gas Inventories. Wherever possible the description and evaluation of each policy and measure should examine reductions in all of the relevant gases listed in paragraph 11 above. Their description should, in principle, be structured along the following lines, as appropriate:<sup>b</sup>

#### Carbon dioxide

- Cross-sectoral
- Energy and transformation industries
- Transport
- Industry (energy-related)
- Industry (non-energy)
- Residential, commercial and institutional
- Fugitive fuel emissions
- Agriculture
- Land-use change and forestry

#### Methane

- Waste management (including sewage treatment)
- Agriculture (non-energy)
- Fugitive fuel emissions
- Industry (non-energy)
- Industry (energy-related)
- Land-use change and forestry

#### Nitrous oxide

- Industry (non-energy)
- Industry (energy-related)
- Agriculture (non-energy)
- Transport
- Energy and transformation industries
- Land-use change and forestry

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<sup>b</sup> Parties need include only those sectors where they have specific policies or measures to describe. Sectors might be further disaggregated, or other sectors added, as appropriate. Impacts of policies and measures should be included under each appropriate gas and sector. They need be described only once, where they have the most significant impact, with appropriate cross-references.



Other greenhouse gases and precursors<sup>c</sup>

- Transport
- Energy and transformation industries
- Industry (non-energy)
- Industry (energy-related)
- Residential, commercial and institutional
- Land-use change and forestry
- Solvent and other product use
- Waste management (including sewage treatment)

24. To facilitate transparency, enough detail should be provided about each individual policy and measure described in the text of the national communication to allow a third party to understand the action's objective and degree of implementation, as well as how the greenhouse gas effects of the action will be monitored over time. The following information should be included in the description of individual policies and measures:

- (a) Objective(s) of the measure in terms of the gas(es) and sector(s) targeted;
- (b) Type of policy instrument used by the measure (e.g. economic instrument, regulation or guideline, voluntary agreement, information, education and training, research and development related to mitigation measures);
- (c) How the policy or measure interacts with other policies and measures described;
- (d) Status of implementation of, and/or commitment to, the policy or measure. (This should, where appropriate, make reference to a section of the national communication related to national circumstances that describes the policy-making process in the country or organization);
- (e) How the measure is expected to function or is functioning;
- (f) Monitoring through intermediate indicators of progress for policies and measures. (These may be related to legislative processes, emissions-related activities or the broader objectives of the policies and measures);
- (g) A quantitative estimate of the mitigation impact of the policy or measure or, if unavailable, a ranking of individual policies and measures according to their relative importance in mitigation; and

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<sup>c</sup> Other greenhouse gases might be disaggregated if appropriate.

(h) Information (including details of the calculation methodologies) relating to the cost of the policy or measure, to the extent possible.

Parties should use table 1 in appendix III below to summarize the information provided on policies and measures, with all fields of the table completed, to the extent possible.

25. Parties should report on action taken to implement commitments under Article 4.2(e)(ii) of the Convention, which requires that Parties identify and periodically review their own policies and practices which encourage activities that lead to greater levels of anthropogenic emissions of greenhouse gases not controlled by the Montreal Protocol than would otherwise occur. Parties should also provide the rationale for such actions in the context of their national circumstances.

26. Under Article 12.1(b), Parties may also briefly describe in a separate section of the national communication, policies and measures under consideration that have not yet been adopted.

#### Activities implemented jointly

27. Bearing in mind that a separate and distinct process for reporting on activities implemented jointly has been established by decision 5/CP.1, and by the adoption by the SBSTA at its second session of the initial framework for reporting activities implemented jointly, Parties may wish to include relevant summary information on activities implemented jointly.

#### Projections and assessment of effects of measures

28. In accordance with Article 4.2(b), national communications should include a projection of future greenhouse gas emission and removal levels. The projection should, to the extent possible, incorporate the effects of policies and measures that are implemented or committed to when the national communication is produced (that is, a "with measures" scenario). In the interest of transparency, Parties should include baseline projections, indicating, using table 1, which measures are included and which measures are additional to these baseline projections.

29. At a minimum, projections would be made of future emissions and removals of the following greenhouse gases: CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O, PFCs, HFCs and SF<sub>6</sub>. Parties are encouraged to provide projections of the indirect greenhouse gases CO, NO<sub>x</sub> and NMVOCs, as well as sulphur oxides. Where methodological or data gaps exist, information should be presented in a transparent manner.

30. The Convention requires that Parties provide information on projected anthropogenic emissions by sources and removals by sinks (Article 4.2(b)) as well as specific estimates of the effects of policies and measures on those levels (Article 12.2(b)). An effective process for the consideration of such information requires that such projections be provided for at

least one common reference year. Taking account of the time period specified in Article 4.2(a), data should be provided for the year 2000. In view of the objective of the Convention and the intent to modify longer-term trends in emissions, Parties should also include projections on a quantitative basis for the years 2005 and 2010, and should make their best efforts to provide estimates for 2020, recognizing that uncertainties will vary from gas to gas and will be greater in more distant years.

31. While Parties should present the projection on a gas-by-gas basis, as indicated in paragraph 4 above, they should also disaggregate the results by sector.

32. Parties should summarize the projections data in accordance with the categorization in the summary tables of the IPCC Guidelines on National Greenhouse Gas Inventories, using tables 2 to 7 in appendix III below.

33. Parties are encouraged to include separately projections of emissions from international bunker fuels and/or provide information which will facilitate international projections of bunker fuel emissions.

34. Parties are encouraged to present projections from levels of emissions in 1990 -- or other base years for some Annex I Parties with economies in transition -- that are consistent with base year inventory data. Any differences should be explained.

35. In accordance with Article 12.2(b), national communications should provide a specific estimate of the total effect on greenhouse gas emissions and removals of policies and measures. This specific estimate should, to the extent possible, take into account all policies and measures implemented or committed to (as outlined in paragraph 20 above).

36. In addition, Parties should, wherever possible, provide estimates of the effect of individual policies and measures on future greenhouse gas emissions and removals. This section could also describe the effects of the sequence of the implementation of policies and measures or the effects of a combination of instrument types or synergies with other measures. Parties may also describe the mechanisms that lead to reductions, as well as how they arrived at their estimates.

37. In the interests of transparency, when projecting greenhouse gas emissions and removals, and estimating the specific and total effect of policies and measures on emissions and removals, Parties should:

(a) Be free to use the model(s) and/or approach(es) they are most familiar with and which, in their view, provide the most accurate results;

(b) Provide enough information to allow a third party to obtain a qualitative understanding of the model(s) and/or approach(es) used and their relationship to each other;

(c) Summarize strengths and weaknesses of the model(s) and/or approach(es) used and provide an indication of their scientific and technical credibility; and

(d) Ensure that the model(s) and/or approach(es) used account for any overlap or synergies that may exist between different policies and measures.

38. To ensure transparency, national communications should include enough information to provide a third party with a quantitative understanding of the key assumptions used to develop projection(s) of greenhouse gas emissions and removals and estimate(s) of the total effects of policies and measures on emissions and removals. Taking into account paragraph 6 above, values of key variables should be clearly presented for the base year and values of key assumptions for 2000, and for other years, preferably 1995, 2005, 2010 and 2020. Parties should also provide information for the base year and 2000 on other key outputs of the model(s) and/or approach(es) used. This could include, *inter alia*, projected energy balances. Parties should, to the extent possible, summarize key variables and assumptions by completing table 8 in appendix III below. In addition, Parties may draw upon the illustrative lists of possible key assumptions and outputs included in appendix I below.

39. If, in the projections analysis, Parties carry out any adjustments to base year emissions, for example for climate variations or trade patterns in electricity, these adjustments should be reported in a transparent manner, with clear indications of the method followed. Both adjusted and unadjusted data should be provided.

40. When providing a qualitative discussion of the uncertainty associated with the results of projections and specific estimates of effects (see paragraph 8 above), Parties are encouraged to present the findings of sensitivity analyses, illustrating how the results would be affected by changes in key assumptions.

#### Vulnerability assessment and adaptation measures

41. A communication should review briefly the expected impacts of climate change for the Party concerned and outline the actions taken to implement Article 4.1(b) and (e) with regard to adaptation. Parties are encouraged to use the IPCC Technical Guidelines for Assessing Climate Change Impacts and Adaptations. Parties could refer, *inter alia*, to integrated plans for coastal zone management, water resources and agriculture. Parties are also encouraged to report on specific results of scientific research in the field of vulnerability assessment and adaptation.

#### Financial resources and transfer of technology and know-how

42. In accordance with Article 12.3, Annex II Parties shall provide separately detailed information on the activities undertaken in 1994, 1995 and, if available, in 1996 to give effect to each of their different commitments under Article 4.3, 4.4, and 4.5, as follows:

(a) Indicate what "new and additional financial resources to meet the agreed full costs incurred by developing country Parties in complying with their obligations under Article 12, paragraph 1" have been provided. They shall indicate clearly how they have determined resources as being "new and additional";

(b) Provide, to the extent possible, detailed information on the provision of financial resources to meet the agreed full incremental costs incurred by developing countries in their implementation of measures covered under Article 4.1 of the Convention;

(c) Provide detailed information on the assistance provided for the purpose of assisting developing country Parties that are particularly vulnerable to the adverse effects of climate change in meeting the costs of adaptation to those adverse effects;

(d) Provide detailed information on measures taken to promote, facilitate and finance, as appropriate, the transfer of, or access to, environmentally sound technologies<sup>d</sup> and know-how to other Parties, particularly developing country Parties; and

(e) Report separately, to the extent possible, their activities for the financing of access by developing countries of "hard" or "soft" environmentally sound technologies, with reference to table 11 in appendix III below.

43. Parties shall, when reporting activities related to the promotion, facilitation and financing of the transfer of, or access to, environmentally sound technologies, clearly distinguish between activities undertaken by the public sector and by the private sector. Noting the need to be flexible in reporting private sector activities, Parties should indicate in what way activities by the private sector help meet the commitments of Parties under Article 4.3, 4.4 and 4.5 of the Convention.

44. When communicating information on the provision of financial resources, Annex II Parties shall distinguish between financial contributions to the interim operating entity of the financial mechanism, to regional and other multilateral institutions and programmes, and financial resources provided through bilateral channels to other Parties. These Parties should complete tables 9a, 9b, 10a and 10b contained in appendix III below.

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<sup>d</sup> The term "transfer of technology", as used in this note, encompasses practices and processes such as "soft" technologies, for example, capacity building, information networks, training and research, as well as "hard" technologies, for example, equipment to control, reduce or prevent anthropogenic emissions of greenhouse gases in the energy, transport, forestry, agriculture, and industry sectors, to enhance removals by sinks, and to facilitate adaptation.

#### Research and systematic observation

45. Pursuant to Articles 4.1(g), 5 and 12.1(b), Annex I Parties should communicate information on their actions relating to research and systematic observation. This could include, *inter alia*, information on:

- (a) Research on the impacts of climate change;
- (b) Modelling and prediction, including global circulation models;
- (c) Climate process and climate system studies;
- (d) Data collection, monitoring and systematic observation, including data banks;
- (e) Socio-economic analysis, including analysis of both the impacts of climate change and response options; and
- (f) Technology research and development.

46. The communications could address both domestic programmes and international programmes (for example, the World Climate Programme and the International Geosphere-Biosphere Programme), and the IPCC. They should also reflect actions taken to support related capacity-building in developing countries.

47. The communications should be limited to reporting on actions undertaken rather than the results of such efforts. For example, the results of research studies or model runs should not be included in this section.

#### Education, training and public awareness

48. In accordance with Articles 4.1(i), 6 and 12.1(b), Annex I Parties should communicate information on their actions relating to education, training and public awareness. This would include information on relevant domestic programmes and participation in international activities. For example, the extent of public participation in the preparation or domestic review of the national communication could be reflected.

#### Special considerations

49. Some Annex I Parties may, in the context of their communications, seek to be accorded "flexibility" or "consideration", in accordance with Article 4.6 and 4.10 of the Convention. If this were to be the case, those Parties should be expected to state clearly the special consideration they are seeking and to provide an adequate explanation of their circumstances.

Basic data (national circumstances)

50. Although not explicitly required by the Convention, a Party may wish to provide other information relevant to its greenhouse gas emission/removal profile. This would permit readers to put the information on its implementation of the Convention in context, could help to explain certain trends and would provide data valuable in the analysis and aggregation of the submissions. The information would tend to be "historical" in character, although the appropriate time period would vary from country to country. Relevant information could include the following:

- (a) Population profile, for example, growth rates, population density and distribution, with some historical perspective (e.g. 1970-1990), and greenhouse gas emission per capita;
- (b) Geographic profile;
- (c) Climatic profile, for example, data on heating and cooling degree days and rainfall;
- (d) Economic profile, for example, gross domestic product (GDP), GDP per capita (expressed in domestic currency and purchasing power parities (PPP)), GDP growth rates, GDP by sector, and imports and exports, agricultural subsidies, with some historical perspective (e.g. 1970-1990), and greenhouse gas emissions per GDP;
- (e) Energy profile, for example, energy prices, energy taxes, energy subsidies, vehicle taxes, fuel taxes, electricity prices, information on the market structure of electricity, natural gas, coal and oil markets, energy consumption (by sector, fuel type, per capita, per unit of GDP), domestic production of energy as proportion of total domestic energy consumption, energy intensity and 1990 energy pricing for commercial and non-commercial consumers (including taxes), with some historical perspective (e.g. 1970-1990);
- (f) Social profile, for example, information such as average dwelling size, number of vehicles per capita and per family unit, and personal and freight traffic (billions km/person) by type (air, rail, road and public/private);
- (g) For sectors emitting large quantities of greenhouse gases, an outline of which level of government has responsibility for implementing which policies and measures that have an impact on greenhouse gas emissions; and
- (h) Information relating to the application of and experience with indicators for performance in greenhouse gas mitigation. Such indicators might address overall national performance and sectoral/sub-sectoral performance.

51. Parties are encouraged to report emission estimates associated with exports of electricity in a separate category. Parties are also encouraged to report on the national generation from all sources by fuel and estimates of the average transmission losses. Exporting and importing countries are encouraged to report on the annual aggregate quantity of electricity trade in kilowatt hours, as well as to whom electricity was sent and the associated quantities (including associated transmission losses).

#### Structure and executive summary

52. The minimum set of information identified in these guidelines should be communicated by a Party to the Conference of the Parties in a single document. Any additional or supporting information may be supplied in the main document or through other documents such as a technical annex.

53. A communication should include an executive summary that would present the key information and data from the full document. The executive summaries will be translated and distributed widely. In view of the limits on translation, it would be useful to envisage an executive summary of no more than 10 pages.

54. Parties are encouraged to organize the information communicated according to the indicative outline provided in appendix II below.

#### Language

55. National communications may be submitted in one of the working languages of the United Nations. This would be without prejudice to the ulterior determination of official and working languages for the Conference of the Parties and its subsidiary bodies and for the Convention secretariat. Annex I Parties are also encouraged to submit, to the extent possible and where relevant, a translation of their communication into English.

#### Length

56. The length of a communication should be decided by the submitting Party. Every effort should be made to avoid overly lengthy communications in order to reduce the paper burden and to facilitate the consideration process. Parties are encouraged to provide electronic versions of communications which are compatible with the requirements of the secretariat.



## **Appendix I**

### **Examples of key assumptions that may be required to project greenhouse gas emissions and removals or to estimate the specific effects of policies and measures and their costs**

- GDP level (national currency) and annual growth rate (consistent with economic forecasts of the Party)
- Assumptions on exchange rates between the domestic currency and the United States dollar
- Population level (millions) and compound annual growth rate
- Interest rate and public sector discount rate, where available
- Annual rate of autonomous energy efficiency improvement in total and by sector
- Total housing, including turnover (number of dwellings)
- Commercial floor space, including turnover (thousands of square kilometres)
- Vehicle-kilometres travelled by vehicle type (thousands)
- Policy context (description of significant measures that reduce emissions or enhance removals that have been incorporated in the projection, as well as how they were incorporated)
- Rate of penetration and absolute levels of use of new end-use technologies

### **Examples of other key outputs that may be produced when projecting greenhouse gas emissions and removals or estimating the specific effects of policies and measures**

- Primary energy production by fuel type (petajoules)
- Primary energy demand by fuel type, as well as electricity (petajoules)
- Energy demand by sector (petajoules)
- Final energy consumption by end-use (petajoules)
- Head of livestock (thousands by species)
- Rice cultivation (area cultivated in hectares)
- Nitrogen fertilizer and manure use (tonnes of nitrogen)
- Forest area cleared (thousands of hectares)
- Waste landfilled (tonnes)
- Waste water biochemical oxygen demand (kg)
- Energy imports/exports (petajoules)
- Primary energy per unit of production in the industrial and commercial sectors
- Energy consumption per square metre in the residential and commercial sectors
- Primary energy for transport (per tonne-km or passenger-km)
- Electricity and heat produced per unit of fuel used in thermal power stations

## **Appendix II**

### **Indicative outline for presentation of information in communications**

1. Executive summary
2. Introduction
3. National circumstances
4. Inventories of anthropogenic greenhouse gas emissions and removals
5. Policies and measures
6. Projections and effects of policies and measures
7. Expected impacts of climate change and vulnerability assessment
8. Adaptation measures
9. Financial assistance and technology transfer
10. Research and systematic observation
11. Education, training and public awareness

**Appendix III****Table 1. Summary of policies and measures: CO<sub>2</sub>**

<sup>1</sup> Parties should use an asterisk (\*) to indicate that a measure is not included in the baseline projection.

Name of policy/ measure <sup>1</sup>	Type of instrument	Objective and/or Method of achieving reduction (including description of how effects take place)	Sector	Status of implementation (planned/ implemented; legislation passed or not; status of funding)	Estimate of mitigation impact				Monitoring: intermediate indicator of progress
					2000	2005	2010	2012	
1.									
2. etc.									

Similar tables should be completed for CH<sub>4</sub>, N<sub>2</sub>O, NO<sub>x</sub>, NMVOCs, CO, PFCs, SF<sub>6</sub> and HFCs, noting that if Parties do not provide projections for NO<sub>x</sub>, NMVOCs and CO, they need not complete the columns on "estimate of mitigation impact" in the tables relating to these gases.

**Table 2. Summary of projections of anthropogenic emissions of CO<sub>2</sub> (gigagrams)**

	1990	1995	2000	2005	2010	2020
Fuel combustion: energy and transformation industries						
Fuel combustion: industry						
Fuel combustion: transport						
Fuel combustion: other						
Other						
Total						

**Table 3. Summary of projections of removals of CO<sub>2</sub> by sinks and reservoirs (gigagrams)**

	1990	1995	2000	2005	2010	2020
Agriculture						
Land-use change and forestry						
Other						
Total removals						

**Table 4. Summary of projections of anthropogenic emissions of CH<sub>4</sub> (gigagrams)**

	1990	1995	2000	2005	2010	2020
Fuel combustion						
Fugitive emissions from fuels						
Industrial processes						
Enteric fermentation						
Animal wastes						
Rice cultivation						
Waste						
Other						
Total						

**Table 5. Summary of projections of anthropogenic emissions of N<sub>2</sub>O (gigagrams)**

	1990	1995	2000	2005	2010	2020
Transport						
Other energy sources						
Industrial processes						
Agriculture						
Waste						
Other						
Total						

**Table 6. Summary of projections of anthropogenic emissions of other greenhouse gases (gigagrams)**

	1990	1995	2000	2005	2010	2020
SF <sub>6</sub>						
HFCs						
PFCs						
Other (specify)						

**Table 7. Summary of projections of anthropogenic emissions of precursors and SO<sub>x</sub> (gigagrams)**

	1990	1995	2000	2005	2010	2020
CO						
NO <sub>x</sub>						
NMVOCs						
SO <sub>x</sub>						

**Table 8. Summary of key variables and assumptions in the projections analysis**

	1990	1995	2000	2005	2010	2020
World coal prices (US\$/ton)						
World oil prices (US\$/bbl)						
Domestic energy prices (by fuel type and for electricity) for different relevant sectors (e.g. residential, commercial and institutional; industry; transport)						
GDP (domestic currency)						
Population (millions)						
New vehicle efficiency (by vehicle type) (litres/100km)						
Average vehicle km travelled						
Primary energy demand (Petajoules)						
Index of manufacturing production (1990=100)						
Index of industrial production (1990=100)						
Other						

**Table 9a. Financial contributions to the operating entity or entities of the financial mechanism, regional and other multilateral institutions and programmes**

	Contributions (millions of US dollars)		
	1994	1995	1996*
Global Environment Facility			
Multilateral institutions			
1. World Bank			
2. International Finance Corporation			
3. African Development Bank			
4. Asian Development Bank			
5. European Bank for Reconstruction and Development			
6. Inter-American Development Bank			
7. United Nations Development Programme			
8. Other			
a)			
b)			
c)			
Multilateral scientific programmes			
1.			
2.			
3.			
4.			
5.			
Multilateral technology programmes			
1.			
2.			
3.			
4.			
5.			
Multilateral training programmes			
1.			
2.			
3.			
4.			
5.			

\* If available.

**Table 9b. New and additional financial contributions to the operating entity or entities of the financial mechanism, regional and other multilateral institutions and programmes**

	Contributions (millions of US dollars)		
	1994	1995	1996*
Global Environment Facility			
Multilateral institutions			
1. World Bank 2. International Finance Corporation 3. African Development Bank 4. Asian Development Bank 5. European Bank for Reconstruction and Development 6. Inter-American Development Bank 7. United Nations Development Programme 8. Other <ul style="list-style-type: none"> <li>a)</li> <li>b)</li> <li>c)</li> </ul>			
Multilateral scientific programmes			
1. 2. 3. 4. 5.			
Multilateral technology programmes			
1. 2. 3. 4. 5.			
Multilateral training programmes			
1. 2. 3. 4. 5.			

\* If available.



**Table 10a. Bilateral financial contributions related to the implementation of the Convention, 1994**  
(millions of US dollars)

Recipient country	Mitigation						Adap-tation	Other*
	Energy	Transport	Forest	Agriculture	Waste manage-ment	Industry		
1.								
2.								
3.								
4.								
5.								
6.								
7.								
8.								
9.								
10.								
11.								
12.								
13.								
14.								
15.								
16.								
17.								
18.								
19.								
20. All other								

\* For greenhouse gas inventories, as under Article 4.1(a).

Similar tables should be completed for 1995 and, if available, for 1996.

**Table 10b. New and additional bilateral financial contributions related to the implementation of the Convention, 1994**  
(millions of US dollars)

	Mitigation						Adap- tation	Other*
Recipient country	Energy	Transport	Forest	Agriculture	Waste manage- ment	Industry		
1.								
2.								
3.								
4.								
5.								
6.								
7.								
8.								
9.								
10.								
11.								
12.								
13.								
14.								
15.								
16.								
17.								
18.								
19.								
20. All other								

\* For greenhouse gas inventories, as under Article 4.1(a).

Similar tables should be completed for 1995 and, if available, for 1996.

**Table 11. Projects or programmes that promote, facilitate and/or finance transfer of or access to "hard" and "soft" technologies**

Project / programme title:			
Purpose:			
Recipient country	Sector	Total funding	Years in operation
Description:			
Ministry or company, contact person, address and phone number:			
Impact on greenhouse gas emissions/sinks (optional):			

This table should also be used to provide a detailed description of selected private sector projects or programmes that promote, facilitate and/or finance transfer of or access to "hard" and "soft" technologies in 1994, 1995 or, if available, in 1996, as described in paragraph 42 (e) of the above annex.