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## Subsidiary Body for Implementation

Forty-fourth session

Bonn, 16–26 May 2016

Agenda item 3(d)

**Reporting from and review of Parties included in Annex I to the Convention**

**Revision of the “Guidelines for the preparation of national communications by Parties included in Annex I to the Convention, Part II: UNFCCC reporting guidelines on national communications”**

## **Revision of the “Guidelines for the preparation of national communications by Parties included in Annex I to the Convention, Part II: UNFCCC reporting guidelines on national communications”**

### **Draft conclusions proposed by the Chair**

1. The Subsidiary Body for Implementation (SBI) continued its consideration, initiated at SBI 40, of the revision of the “Guidelines for the preparation of national communications by Parties included in Annex I to the Convention, Part II: UNFCCC reporting guidelines on national communications” (hereinafter referred to as the UNFCCC reporting guidelines on NCs).<sup>1</sup>
2. The SBI acknowledged the progress in the revision of the UNFCCC reporting guidelines on NCs made by Parties during the workshop held on 13 and 14 May 2016<sup>2</sup> and noted that the workshop report provided a good basis for work on the matter during the session.
3. The SBI agreed on the text of the draft revised guidelines as contained in the annex, except for the bracketed text in paragraph 71.
4. The SBI further agreed to continue its consideration of the bracketed text mentioned in paragraph 3 above with a view to finalizing the revised UNFCCC reporting guidelines on NCs at SBI 45 (November 2016) and recommending them for consideration and adoption by the Conference of the Parties at its twenty-second session (November 2016).

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<sup>1</sup> Contained in document FCCC/CP/1999/7.

<sup>2</sup> The workshop report is available at <<https://cms.unfccc.int/preview.php?id=9466>>.



## Annex

### **Guidelines for the preparation of national communications by Parties included in Annex I to the Convention, Part II: UNFCCC reporting guidelines on national communications**

[English only]

#### **I. OBJECTIVES**

1. The objectives of these guidelines are:

- (a) To assist Parties included in Annex I to the Convention (Annex I Parties) in meeting their commitments under Articles 4 and 12 of the Convention;
- (b) To promote the provision of consistent, transparent, comparable, accurate and complete information in order to enable a thorough review and assessment of the implementation of the Convention by Parties, and to monitor the progress that Annex I Parties are making towards meeting their goals under the Convention;
- (c) To assist the Conference of the Parties (COP) in carrying out its responsibility to review the implementation of the Convention pursuant to its Article 7, paragraph 2(a), and the adequacy of the commitments under Article 4, paragraph 2(a) and (b), in accordance with Article 4, paragraph 2(d), of the Convention.

#### **II. EXECUTIVE SUMMARY**

2. The national communication shall include an executive summary that summarizes the information and data contained in the full document. The executive summary shall consist of no more than 15 pages.

#### **III. NATIONAL CIRCUMSTANCES RELEVANT TO GREENHOUSE GAS EMISSIONS AND REMOVALS**

3. Parties shall provide a description of their national circumstances, how the national circumstances affect greenhouse gas (GHG) emissions and removals, and how the national circumstances and changes therein affect GHG emissions and removals over time. Parties should provide information on how their national circumstances are relevant to factors affecting GHG emissions and removals, including disaggregated indicators, to explain the relationship between the national circumstances and emissions or removals. Parties may provide whatever information best describes their own national circumstances and historical trends. However, in order to improve the comparability of national communications, reporting information under the following headings is recommended:

- (a) Government structure: for example, roles and responsibilities of different levels of government and relevant interministerial decision-making processes or bodies;
- (b) Population profile: for example, total population, density and distribution;
- (c) Economic profile: for example, gross domestic product (GDP), GDP per capita (expressed in domestic currency and purchasing power parity), GDP by sector and international trade patterns;
- (d) Geographical profile: for example, area, latitude, land use and ecosystems;
- (e) Climate profile: for example, temperature distribution, annual temperature variation, precipitation distribution, climate variability and extreme events;
- (f) Energy (by fuel type, where appropriate): for example, energy resource base, production, market structure, prices, taxes, subsidies and trade;
- (g) Transportation: for example, modes (passenger and freight), travel distances and fleet characteristics;
- (h) Industry: for example, structure;
- (i) Waste: for example, waste sources and management practices;
- (j) Building stock and urban structure: for example, profile of residential and commercial buildings;
- (k) Agriculture: for example, structure and management practices;
- (l) Forest: for example, types and management practices;
- (m) Other circumstances.

#### **Flexibility in accordance with Article 4, paragraphs 6 and 10, of the Convention**

4. Parties requesting flexibility or consideration in accordance with Article 4, paragraphs 6 and 10, of the Convention shall state the type of special consideration that they are seeking and provide a full explanation of their circumstances.

## **IV. GREENHOUSE GAS INVENTORY INFORMATION**

### **A. Summary tables**

5. Summary information from the national GHG inventory prepared in accordance with the “Guidelines for the preparation of national communications by Parties included in Annex I to the Convention, Part I: UNFCCC reporting guidelines on annual greenhouse gas inventories” (hereinafter referred to as the UNFCCC Annex I inventory reporting guidelines) (annex I to decision 24/CP.19 and any relevant decisions adopted subsequently by the COP) shall be provided for the period from 1990 (or another base year) to the latest year reported in the most recent annual inventory submission available (the most recent inventory year). The information provided in the national communication should be consistent with that provided in the most recent annual inventory submission available (for the year prior to the due date of submission of the national communication) and any differences should be fully explained.

6. For the purpose of the national communication, complete inventory information need not be provided. However, at a minimum, Parties shall report the summary of GHG emissions and removals, including the information expressed in carbon dioxide (CO<sub>2</sub>) equivalent in emission trend tables provided in the common reporting format contained in the UNFCCC Annex I inventory reporting guidelines. Parties may elect to replicate the information reported in the biennial report submitted with the national communication. The tables may be provided as an annex, as part of the national communication rather than in the main text.

### **B. Descriptive summary**

7. In the main text of the national communication, Parties should provide a descriptive summary and figures illustrating the GHG emissions reported in the summary tables referred to in paragraph 6 above. Parties should provide a description of the factors underlying emission trends.

### **C. National inventory arrangements**

8. Parties shall provide summary information on their national inventory arrangements in accordance with the reporting requirements related to national inventory arrangements contained in the UNFCCC Annex I inventory reporting guidelines and on any changes to those national inventory arrangements since their previous national communication or biennial report.

## **V. POLICIES AND MEASURES**

### **A. Selection of policies and measures to be reported in the national communication**

9. In accordance with Article 12, paragraph 2, of the Convention, Parties shall communicate information on policies and measures adopted to implement their commitments under Article 4, paragraph 2(a) and (b), of the Convention, which need not have the limitation or reduction of GHG emissions or the enhancement of removals as a primary objective.

10. In their reporting, Parties should give priority to policies and measures, or combinations of policies and measures, that have the most significant impact on GHG emissions and removals, and they may also indicate those that are innovative and/or effectively replicable by other Parties. Parties may report on adopted policies and measures and those in the planning stage, but should clearly distinguish them from implemented policies and measures. The national communication does not have to report every policy and measure that affects GHG emissions.

11. Policies and measures reported on should be: those implemented (those for which one or more of the following applies: (1) national legislation is in force; (2) one or more voluntary agreements have been established; (3) financial resources have been allocated; and (4) human resources have been mobilized); those adopted (those for which an official government decision has been made and there is a clear commitment to proceed with implementation); and/or those planned (options under discussion or announced and with a realistic chance of being adopted and implemented in the future) by governments at the national, state, provincial, regional and local levels, as applicable.

Furthermore, policies and measures reported may also include those adopted in the context of regional or international efforts.

12. Parties should report on actions taken to implement their commitments under Article 4, paragraph 2(e)(ii), of the Convention, which requires them to identify and periodically update their own policies and practices that encourage activities that lead to greater levels of anthropogenic GHG emissions than would otherwise occur. Parties should also provide the rationale for such actions in the context of their national communications.

13. Parties are encouraged to provide, to the extent possible, detailed information on the assessment of the economic and social consequences of response measures.

### **B. Structure of the policies and measures section of the national communication**

14. Parties shall organize the reporting on policies and measures by sector, indicating which GHGs (CO<sub>2</sub>, methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulphur hexafluoride (SF<sub>6</sub>) and nitrogen trifluoride (NF<sub>3</sub>)) are affected by which policies and measures. To the extent appropriate, the following sectors should be considered: energy, transport, industry/industrial processes and product use, agriculture, forestry/land use, land-use change and forestry (LULUCF), waste management/waste, other sectors and cross-cutting. Each sector shall have its own textual description of the significant policies and measures, as set out in section D below, supplemented by table 1 below. Parties may include separate text describing cross-sectoral policies and measures. Policies and measures influencing GHG emissions from international transport should be reported under the transport sector.

15. In cases where a policy or measure has been maintained over time and is thoroughly described in a Party's previous national communication and/or biennial report, reference should be made to it and only a brief description contained in the latest national communication, focusing on any alterations to the policy or measure or effects achieved.

16. Some information, such as the effect of policies and measures, may be presented in aggregate for several complementary measures in a particular sector or affecting a particular gas.

### **C. Policymaking process**

17. The national communication should describe the overall policy context, including any national targets for GHG mitigation. Strategies for sustainable development, long-term mitigation strategies or other relevant policy objectives may also be covered.

18. The national communication should provide a description of the way in which progress with policies and measures to mitigate GHG emissions is monitored and evaluated over time. Institutional arrangements for the monitoring of GHG mitigation policy should also be reported in this context.

#### D. Policies and measures and their effects

19. The presentation of each policy or measure shall include information on each of the subject headings listed below. The presentation of each policy or measure should be concise and include the details suggested after each subject heading as follows:

- (a) *Name of policy or measure*;
- (b) *Sector(s) affected*. To the extent possible, the following sectors should be used: energy, transport, industry/industrial processes and product use, agriculture, forestry/LULUCF, waste management/waste, other sectors and cross-cutting, as appropriate;
- (c) *The GHG(s) affected*;
- (d) *Objective and/or activity affected*. The description of the objectives should focus on the key purposes and benefits of the policy or measure, including a description of activities and/or source and sink categories affected. Objectives should be described in quantitative terms, to the extent possible;
- (e) *Type of instrument*. To the extent possible, the following terms should be used: economic, fiscal, voluntary agreement, regulatory, information, education, research or other;
- (f) *Status of implementation*. It should be noted whether the policy or measure is no longer in place, in the planning stage, has been adopted or is under implementation. For adopted and implemented measures, additional information may include the funds already provided, future budget allocated and the time frame for implementation;
- (g) *Brief description of the policy or measure*;
- (h) *Start year of implementation*;
- (i) *Implementing entity or entities*. This should describe the role of national, state, provincial, regional and local governments and the involvement of any other entities;
- (j) *Estimate of mitigation impact* (for a particular year, not cumulative, in kt CO<sub>2</sub> eq).

20. In the description of each policy or measure or set of complementary measures reported, Parties shall include, as appropriate, a quantitative estimate of the impact of individual policies or measures or collections of policies and measures (if such estimation is not possible, Parties shall explain why), including estimated changes in activity levels and/or emissions and removals due to adopted and implemented policies and measures reported and a brief description of estimation methods. Estimates should be presented for a particular year, ending in either a zero or a five, following the most recent inventory year.

21. Parties may also provide information under the following headings for each policy or measure reported:

- (a) *Information on costs of policy or measure*. Such information should be accompanied by a brief definition of the term 'cost' in this context;
- (b) *Information on non-GHG mitigation benefits*. Such benefits may include, for example, reduced emissions of other pollutants, or health benefits;

(c) *Information on how it interacts with other policies and measures at the national level.* This may include a description of how policies complement each other in order to enhance overall GHG mitigation.

22. In the light of the information provided in paragraph 34 below, Parties shall provide information on how they believe their policies and measures are modifying longer-term trends in anthropogenic GHG emissions and removals consistent with the objective of the Convention.

**E. Policies and measures no longer in place**

23. When policies and measures listed in previous national communications are no longer in place, Parties may explain why this is so.

**Table 1**  
**Summary of policies and measures by sector**

Name of policy or measure <sup>a</sup>	Sector(s) affected <sup>b</sup>	GHG(s) affected	Objective and/or activity affected	Type of instrument <sup>c</sup>	Status of implementation <sup>d</sup>	Brief description <sup>e</sup>	Start year of implementation	Implementing entity or entities	Estimate of mitigation impact (not cumulative, in kt CO <sub>2</sub> eq)	
									20XX <sup>f</sup>	2020

*Note:* The two final columns specify the year identified by the Party for estimating impacts (based on the status of the measure and whether an ex post or ex ante estimation is available).

*Abbreviation:* GHG = greenhouse gas.

<sup>a</sup> Parties should use an asterisk (\*) to indicate that the policy or measure is included in the 'with measures' projection.

<sup>b</sup> To the extent possible, the following sectors should be used: energy, transport, industry/industrial processes and product use, agriculture, forestry/land use, land-use change and forestry, waste management/waste, other sectors and cross-cutting, as appropriate.

<sup>c</sup> To the extent possible, the following types of instrument should be referred to: economic, fiscal, voluntary agreement, regulatory, information, education, research and other.

<sup>d</sup> To the extent possible, the following descriptive terms should be used to report on the status of implementation: implemented, adopted and planned.

<sup>e</sup> Additional information may be provided on the cost of the policy or measure and the relevant timescale.

<sup>f</sup> Optional year or years deemed relevant by the Party.

## **VI. PROJECTIONS AND TOTAL EFFECT OF POLICIES AND MEASURES**

### **A. Purpose**

24. The primary objective of the projections section of the national communication is to give an indication of future trends in GHG emissions and removals, given current national circumstances and implemented and adopted policies and measures, and to give an indication of the path of emissions and removals without such policies and measures.

### **B. Projections**

25. At a minimum, Parties shall report a ‘with measures’ projection, in accordance with paragraph 26 below, and may report ‘without measures’ and ‘with additional measures’ projections.

26. A ‘with measures’ projection shall encompass currently implemented and adopted policies and measures. If provided, a ‘with additional measures’ projection also encompasses planned policies and measures. If provided, a ‘without measures’ projection excludes all policies and measures implemented, adopted or planned after the year chosen as the starting point for that projection. In their reporting, Parties may refer to their ‘without measures’ projection as a ‘baseline’ or ‘reference’ projection, for example, if preferred, but should explain the nature of that projection.

27. Parties may report a sensitivity analysis for any of the projections, but should aim to limit the number of scenarios presented. Parties may provide the results of a sensitivity analysis for the reported GHG emissions together with a brief explanation of the methodologies and parameters used.

### **C. Presentation of projections relative to actual data**

28. Emission projections shall be presented relative to actual inventory data for the preceding years.

29. For the ‘with measures’ and ‘with additional measures’ projections, the starting point should generally be the most recent inventory year. Parties may provide a ‘without measures’ projection starting from an earlier year.

30. Parties should present their projections relative to unadjusted inventory data for the preceding years presented in the most recent annual inventory submission available. In addition, Parties may present their projections relative to adjusted inventory data. In that case, Parties shall explain the nature of the adjustments.

### **D. Coverage and presentation**

31. Projections shall be presented on a sectoral basis. To the extent possible, the sectoral categories used should be the same as in the GHG inventories.

32. Projections shall be presented on a gas-by-gas basis for the following GHGs: CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O, PFCs, HFCs, SF<sub>6</sub> and NF<sub>3</sub> (treating PFCs and HFCs collectively in each case). Parties may also

provide projections of indirect emissions of carbon monoxide, nitrogen oxide and non-methane volatile organic compounds, as well as sulphur oxide. In addition, projections shall be provided in an aggregated format for each sector as well as for a national total, using global warming potential values agreed upon by the COP.

33. To ensure consistency with inventory reporting, emission projections related to fuel sold to ships and aircraft engaged in international transport shall, to the extent possible, be reported separately and not included in the national total.

34. In view of the objective of the Convention and the intent to modify longer-term trends in emissions and removals, Parties should include information on historical emissions and removals on a quantitative basis for the period from 1990 (or another base year, as appropriate) to the most recent inventory year. The information should be presented for 1990 (and another base year, as appropriate), 1995, 2000, 2005, 2010 and subsequent years that end in either a zero or a five up to the most recent inventory year. Parties should include projections on a quantitative basis, starting from the most recent inventory year and for subsequent years that end in either a zero or a five, extending at least 15 years from the most recent inventory year (e.g. 2020, 2025, 2030 and 2035). Projections and information on historical emissions and removals should be presented in tabular format. The tabular format used shall be as in tables 2, 3 and 4 below. For Parties using a base year other than 1990 for their GHG inventories, in accordance with Article 4, paragraph 6, of the Convention, inventory data for that year shall be given.

**Table 2**  
**Information on updated greenhouse gas projections under a ‘with measures’ scenario<sup>a</sup>**

	GHG emissions and removals <sup>b, c</sup> (kt CO <sub>2</sub> eq)							GHG emission projections <sup>c, d</sup> (kt CO <sub>2</sub> eq)				
	Base year	1990	1995	2000	2005	2010	...	20XX <sup>e</sup>	20YY <sup>f</sup>	...	...	...
<b>Sector</b> <sup>g, h</sup>												
Energy												
Transport												
Industry/industrial processes and product use												
Agriculture												
Forestry/LULUCF												
Waste management/waste												
Other (specify)												
<b>Gas</b>												
CO <sub>2</sub> emissions including net CO <sub>2</sub> from LULUCF												
CO <sub>2</sub> emissions excluding net CO <sub>2</sub> from LULUCF												
CH <sub>4</sub> emissions including CH <sub>4</sub> from LULUCF												
CH <sub>4</sub> emissions excluding CH <sub>4</sub> from LULUCF												
N <sub>2</sub> O emissions including N <sub>2</sub> O from LULUCF												
N <sub>2</sub> O emissions excluding N <sub>2</sub> O from LULUCF												
HFCs												
PFCs												
SF <sub>6</sub>												
Other (specify, e.g. NF <sub>3</sub> )												

	GHG emissions and removals <sup>b, c</sup> (kt CO <sub>2</sub> eq)								GHG emission projections <sup>c, d</sup> (kt CO <sub>2</sub> eq)			
	Base year	1990	1995	2000	2005	2010	...	20XX <sup>e</sup>	20YY <sup>f</sup>	...	...	...
<b>Total with LULUCF<sup>i</sup></b>												
<b>Total without LULUCF</b>												

*Abbreviations:* GHG = greenhouse gas, LULUCF = land use, land-use change and forestry.

<sup>a</sup> In accordance with paragraph 25 of these guidelines, at a minimum Parties shall report a ‘with measures’ projection and they may also report ‘without measures’ and ‘with additional measures’ projections. If a Party chooses to report a ‘without measures’ and/or ‘with additional measures’ projection, it is to use table 3 and/or 4 below, respectively. If a Party does not choose to report a ‘without measures’ or ‘with additional measures’ projection, then it should not include table 3 or 4 in its national communication.

<sup>b</sup> Emissions and removals reported in these columns should be as reported in the most recent annual inventory submission available and consistent with the emissions and removals reported in the table on GHG emissions and trends provided in accordance with section IV of these guidelines. Where the sectoral breakdown differs from that reported in the GHG inventory, Parties should explain in their national communication how the inventory sectors relate to the sectors reported in this table.

<sup>c</sup> Parties may include indirect CO<sub>2</sub> emissions in historical GHG emissions and in GHG emission projections and shall indicate this in a custom footnote below.

<sup>d</sup> Parties should include projections on a quantitative basis starting from the most recent inventory year and for subsequent years that end in either a zero or a five, extending at least 15 years from the most recent inventory year.

<sup>e</sup> The most recent inventory year.

<sup>f</sup> A year that ends in either a zero or a five following the most recent inventory year, extending at least 15 years from the most recent inventory year.

<sup>g</sup> In accordance with paragraph 31 of these guidelines, projections shall be presented on a sectoral basis, to the extent possible, using the same sectoral categories as used in the GHG inventories. This table should follow, to the extent possible, the same sectoral categories as those listed in paragraph 14 of these guidelines; namely, to the extent appropriate, the following sectors should be considered: energy, transport, industry/industrial processes and product use, agriculture, forestry/LULUCF, waste management/waste, other sectors and cross-cutting.

<sup>h</sup> To the extent possible, the following sectors should be used: energy, transport, industry/industrial processes and product use, agriculture, forestry/LULUCF, waste management/waste and other sectors (i.e. cross-cutting), as appropriate.

<sup>i</sup> Parties may choose to report total emissions with or without LULUCF, as appropriate.

*Custom footnote*

**Table 3**  
**Information on updated greenhouse gas projections under a ‘without measures’ scenario<sup>a</sup>**

	GHG emissions and removals <sup>b, c</sup>								GHG emissions and removals <sup>c, d</sup>			
	Base year	1990	1995	2000	2005	2010	...	20XX <sup>e</sup>	20YY <sup>f</sup>	20ZZ <sup>g</sup>	...	...
<b>Sector</b> <sup>h, i</sup>												
Energy												
Transport												
Industry/industrial processes and product use												
Agriculture												
Forestry/LULUCF												
Waste management/waste												
Other (specify)												
<b>Gas</b>												
CO <sub>2</sub> emissions including net CO <sub>2</sub> from LULUCF												
CO <sub>2</sub> emissions excluding net CO <sub>2</sub> from LULUCF												
CH <sub>4</sub> emissions including CH <sub>4</sub> from LULUCF												
CH <sub>4</sub> emissions excluding CH <sub>4</sub> from LULUCF												
N <sub>2</sub> O emissions including N <sub>2</sub> O from LULUCF												
N <sub>2</sub> O emissions excluding N <sub>2</sub> O from LULUCF												
HFCs												
PFCs												
SF <sub>6</sub>												
Other (specify, e.g. NF <sub>3</sub> )												
<b>Total with LULUCF<sup>j</sup></b>												

	<i>GHG emissions and removals<sup>b,c</sup></i>									<i>GHG emissions and removals<sup>c,d</sup></i>		
	<i>(kt CO<sub>2</sub> eq)</i>											
	<i>Base year</i>	<i>1990</i>	<i>1995</i>	<i>2000</i>	<i>2005</i>	<i>2010</i>	<i>...</i>	<i>20XX<sup>e</sup></i>	<i>20YY<sup>f</sup></i>	<i>20ZZ<sup>g</sup></i>	<i>...</i>	<i>...</i>
<b>Total without LULUCF</b>												

*Abbreviations:* GHG = greenhouse gas, LULUCF = land use, land-use change and forestry.

<sup>a</sup> In accordance with paragraph 25 of these guidelines, at a minimum Parties shall report a ‘with measures’ projection and they may also report ‘without measures’ and ‘with additional measures’ projections. If a Party chooses to report ‘without measures’ and/or ‘with additional measures’ projection, they are to use table 3 and/or 4 below, respectively. If a Party does not choose to report ‘without measures’ or ‘with additional measures’ projections, then it should not include table 3 or 4 in the national communication.

<sup>b</sup> Emissions and removals reported in these columns should be as reported in the most recent annual inventory submission available and consistent with the emissions and removals reported in the table on GHG emissions and trends provided in accordance with section IV of these guidelines. Where the sectoral breakdown differs from that reported in the GHG inventory, Parties should explain in their national communication how the inventory sectors relate to the sectors reported in this table.

<sup>c</sup> Parties may include indirect CO<sub>2</sub> emissions in historical GHG emissions and in GHG emission projections and shall indicate this in a custom footnote below.

<sup>d</sup> Parties should include projections on a quantitative basis starting from the most recent inventory year (or an earlier year followed by the most recent inventory year) and for subsequent years that end in either a zero or a five, extending at least 15 years from the most recent inventory year.

<sup>e</sup> The starting year of the projections.

<sup>f</sup> The most recent inventory year, in the case that the projections are started from an earlier year.

<sup>g</sup> A year that ends in either a zero or a five, following the most recent inventory year, extending at least 15 years from the most recent inventory year.

<sup>h</sup> In accordance with paragraph 31 of these guidelines, projections shall be presented on a sectoral basis, to the extent possible, using the same sectoral categories used in the GHG inventories. This table should follow, to the extent possible, the same sectoral categories as those listed in paragraph 14 of these guidelines; namely, to the extent appropriate, the following sectors should be considered: energy, transport, industry/industrial processes and product use, agriculture, forestry/LULUCF, waste management/waste, other sectors and cross-cutting.

<sup>i</sup> To the extent possible, the following sectors should be used: energy, transport, industry/industrial processes and product use, agriculture, forestry/LULUCF, waste management/waste, other sectors (i.e. cross-cutting), as appropriate.

<sup>j</sup> Parties may choose to report total emissions with or without LULUCF, as appropriate.

**Custom footnote**

Table 4  
**Information on updated greenhouse gas projections under a ‘with additional measures’ scenario<sup>a</sup>**

	<i>GHG emissions and removals<sup>b, c</sup></i>							<i>GHG emission projections<sup>c, d</sup></i>				
	<i>(kt CO<sub>2</sub> eq)</i>											
	<i>Base year</i>	<i>1990</i>	<i>1995</i>	<i>2000</i>	<i>2005</i>	<i>2010</i>	<i>...</i>	<i>20XX<sup>e</sup></i>	<i>20YY<sup>f</sup></i>	<i>...</i>	<i>...</i>	<i>...</i>
<b><i>Sector<sup>g, h</sup></i></b>												
Energy												
Transport												
Industry/industrial processes and product use												
Agriculture												
Forestry/LULUCF												
Waste management/waste												
Other (specify)												
<b><i>Gas</i></b>												
CO <sub>2</sub> emissions including net CO <sub>2</sub> from LULUCF												
CO <sub>2</sub> emissions excluding net CO <sub>2</sub> from LULUCF												
CH <sub>4</sub> emissions including CH <sub>4</sub> from LULUCF												
CH <sub>4</sub> emissions excluding CH <sub>4</sub> from LULUCF												
N <sub>2</sub> O emissions including N <sub>2</sub> O from LULUCF												
N <sub>2</sub> O emissions excluding N <sub>2</sub> O from LULUCF												
HFCs												
PFCs												
SF <sub>6</sub>												
Other (specify, e.g. NF <sub>3</sub> )												
<b>Total with LULUCF<sup>i</sup></b>												
<b>Total without LULUCF</b>												

*Abbreviations:* GHG = greenhouse gas, LULUCF = land use, land-use change and forestry.

<sup>a</sup> In accordance with paragraph 25 of these guidelines, at a minimum Parties shall report a ‘with measures’ projection and they may also report ‘without measures’ and ‘with additional measures’ projections. If a Party chooses to report ‘without measures’ and/or ‘with additional measures’ projections, they are to use table 3 and/or 4 below, respectively. If a Party does not choose to report ‘without measures’ or ‘with additional measures’ projections, then it should not include table 3 or 4 in the national communication.

<sup>b</sup> Emissions and removals reported in these columns should be as reported in the most recent annual inventory submission available and consistent with the emissions and removals reported in the table on GHG emissions and trends provided in accordance with section IV of these guidelines. Where the sectoral breakdown differs from that reported in the GHG inventory, Parties should explain in their national communication how the inventory sectors relate to the sectors reported in this table.

<sup>c</sup> Parties may include indirect CO<sub>2</sub> emissions in historical GHG emissions and in GHG emission projections and shall indicate this in a custom footnote below.

<sup>d</sup> Parties should include projections on a quantitative basis starting from the most recent inventory year and for subsequent years that end in either a zero or a five, extending at least 15 years from the most recent inventory year.

<sup>e</sup> The most recent inventory year.

<sup>f</sup> A year that ends in either a zero or a five, following the most recent inventory year, extending at least 15 years from the most recent inventory year.

<sup>g</sup> In accordance with paragraph 31 of these guidelines, projections shall be presented on a sectoral basis, to the extent possible, using the same sectoral categories used in the GHG inventories. This table should follow, to the extent possible, the same sectoral categories as those listed in paragraph 14 of these guidelines; namely, to the extent appropriate, the following sectors should be considered: energy, transport, industry/industrial processes and product use, agriculture, forestry/LULUCF, waste management/waste, other sectors and cross-cutting.

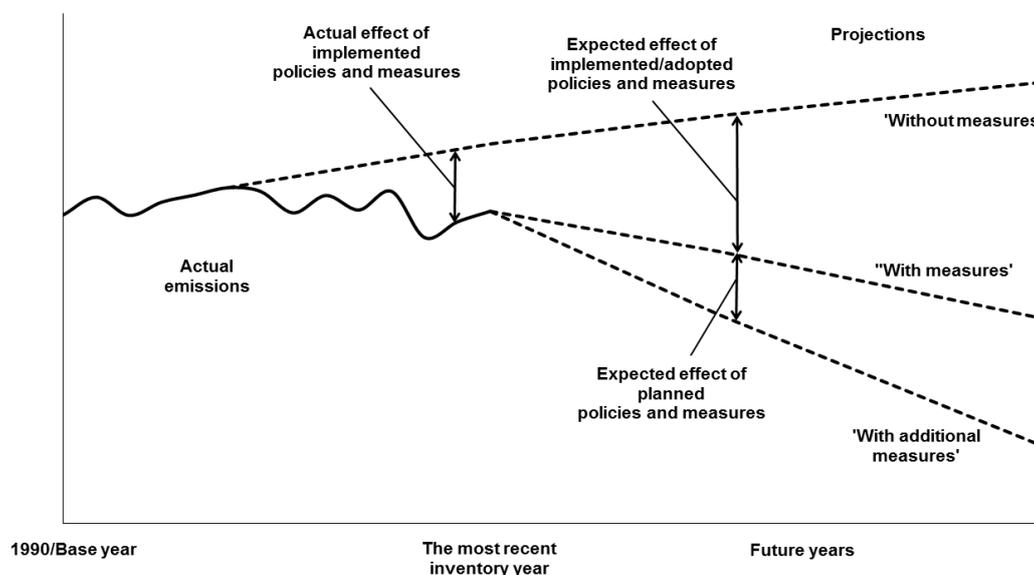
<sup>h</sup> To the extent possible, the following sectors should be used: energy, transport, industry/industrial processes and product use, agriculture, forestry/LULUCF, waste management/waste, other sectors (i.e. cross-cutting), as appropriate.

<sup>i</sup> Parties may choose to report total emissions with or without LULUCF, as appropriate.

*Custom footnote*

35. Figures illustrating the information referred to in paragraphs 31–34 above should be presented showing unadjusted inventory data and a ‘with measures’ projection for the period from 1990 (or another base year, as appropriate) to the most recent inventory year and for subsequent years that end in either a zero or a five, extending at least 15 years from the most recent inventory year. Additional figures may also be presented. The figure below illustrates the presentation of a hypothetical Party’s projection of emissions. It shows unadjusted inventory data for the period from 1990 to the most recent inventory year and ‘with measures’, ‘with additional measures’ and ‘without measures’ projections.

### Hypothetical Party’s projection of emissions



### E. Assessment of aggregate effect of policies and measures

36. The estimated and expected effects of individual policies and measures are addressed in the policies and measures section of the national communication. In the projections section of the national communication, Parties shall present the estimated and expected total effect of implemented and adopted policies and measures. Parties may also present the total expected effect of planned policies and measures.

37. Parties shall provide an estimate of the total effect of their policies and measures, in accordance with the ‘with measures’ definition, compared with a situation without such policies and measures. That effect shall be presented in terms of GHG emissions avoided or sequestered, by gas (on a CO<sub>2</sub> eq basis), in the most recent inventory year and in subsequent years that end in either a zero or a five, extending at least 15 years from the most recent inventory year (not cumulative savings). This information may be presented in tabular format.

38. Parties may estimate the total effect of their measures by calculating the difference between a ‘with measures’ and a ‘without measures’ projection. Alternatively, Parties may use another approach, for example individually assessing the effect of each significant policy and measure and aggregating the individual effects to arrive at a total. In either case, in the

reporting it should be clear from what year onward it was assumed that policies were implemented or not implemented in calculating the estimate.

## **F. Methodology**

39. When projecting GHG emissions and removals and estimating the total effects of policies and measures on emissions and removals, Parties may use any models and/or approaches that they choose. Sufficient information should be reported in the national communication to allow a reader to obtain a basic understanding of such models and/or approaches.

40. In the interest of transparency, for each model or approach used, Parties should briefly:

- (a) Explain for which gases and/or sectors it was used;
- (b) Describe its type and characteristics (for example, top-down model, bottom-up model, accounting model or expert judgment);
- (c) Describe the original purpose that it was designed for and, if applicable, how it has been modified for climate change purposes;
- (d) Summarize its strengths and weaknesses;
- (e) Explain how it accounts for any overlap or synergies that may exist between different policies and measures.

41. Parties should provide references to more detailed information related to the information referred to in paragraph 40(a–e) above.

42. Parties should report the main differences in assumptions, methods employed and results between the projections reported in the current national communication and those reported in previous national communications.

43. The sensitivity of the projections to underlying assumptions should be discussed qualitatively and, where possible, quantitatively.

44. To ensure transparency, Parties should report information on key underlying assumptions and values of variables such as GDP growth, population growth, tax levels and international fuel prices, using table 5 below. The information should be limited to that not covered by paragraph 45 below (i.e. it should not include sector-specific data).

45. To provide the reader with an understanding of emission trends from 1990 to at least 15 years from the most recent inventory year, Parties shall present relevant information on factors and activities for each sector. Such information may be presented in tabular format.

**Table 5**  
**Summary of key variables and assumptions used in the projections analysis<sup>a</sup>**

<i>Key underlying assumptions</i>	<i>Historical<sup>b</sup></i>						<i>Projected</i>			
	<i>1990</i>	<i>1995</i>	<i>2000</i>	<i>2005</i>	<i>2010</i>	<i>...</i>	<i>20XX<sup>c</sup></i>	<i>20YY<sup>d</sup></i>	<i>...</i>	<i>...</i>

<sup>a</sup> Parties should include key underlying assumptions, as appropriate.

<sup>b</sup> Parties should include the historical data used to develop the greenhouse gas emission projections reported.

<sup>c</sup> The most recent inventory year.

<sup>d</sup> A year that ends in either a zero or a five following the most recent inventory year, extending at least 15 years from the most recent inventory year.

## **VII. VULNERABILITY ASSESSMENT, CLIMATE CHANGE IMPACTS AND ADAPTATION MEASURES**

46. The national communication shall include information on the expected impacts of climate change and an outline of the action taken to implement Article 4, paragraph 1(b) and (e), of the Convention with regard to adaptation. Parties are encouraged to use and reference relevant methodologies and guidance for assessing climate change impacts, vulnerability and adaptation measures. Parties may refer, inter alia, to integrated plans for coastal zone management, water resources and agriculture. Parties may also report on specific results of scientific research in the field of vulnerability assessment and adaptation.

47. Parties are encouraged to use the following structure when reporting information in this section:

- (a) Climate modelling, projections and scenarios: for example, updated information on climate modelling, climate projections and scenarios relevant to the assessment of climate change impacts and vulnerability;
- (b) Assessment of risks and vulnerability to climate change: for example, updated information on key economic, social and/or environmental vulnerabilities or risks related to current and expected climate change impacts;
- (c) Climate change impacts: for example, updated information on both observed and potential future impacts of climate change;
- (d) Domestic adaptation policies and strategies: for example, updated information on progress on adaptation policies, strategies or plans that illustrate the Party's medium- and long-term approaches to addressing risks and vulnerability through its broader domestic development and sectoral planning;
- (e) Monitoring and evaluation framework: for example, updated information on approaches to the monitoring and evaluation of implemented adaptation strategies or plans;
- (f) Progress and outcomes of adaptation action: for example, updated information on adaptation measures taken to address current risks and vulnerabilities and on their status of implementation; and updated information on progress and, where possible, outcomes and the effectiveness of already implemented adaptation measures.

## **VIII. FINANCIAL, TECHNOLOGICAL AND CAPACITY-BUILDING SUPPORT**

48. Parties included in Annex II to the Convention (Annex II Parties) shall provide information on the provision of financial, technological and capacity-building support to Parties not included in Annex I to the Convention (non-Annex I Parties), including information to show how this support is new and additional. In reporting such information, Parties should distinguish, to the extent possible, between support provided to non-Annex I Parties for mitigation and adaptation activities, noting the capacity-building elements of such activities, where relevant. For activities with multiple objectives, the funding could be reported as a contribution allocated partially to the other relevant objectives.

49. Each Annex II Party shall provide a description of its national approach to the tracking of the provision of financial, technological and capacity-building support to non-Annex I Parties, if

appropriate. This description shall also include information on indicators and delivery mechanisms used and allocation channels tracked.

50. In reporting information in accordance with paragraphs 52 and 53 below, Annex II Parties shall use any methodology to be developed under the Convention, taking into account international experience. Annex II Parties shall describe the methodology used and shall report in a rigorous, robust and transparent manner the underlying assumptions and methodologies used to produce information on finance.

#### **A. Finance**

51. Each Annex II Party shall describe, to the extent possible, how it seeks to ensure that the resources it provides effectively address the needs of non-Annex I Parties with regard to climate change adaptation and mitigation.

52. Each Annex II Party shall provide information on the financial support that it has disbursed and committed for the purpose of assisting non-Annex I Parties to mitigate GHG emissions and adapt to the adverse effects of climate change and any economic and social consequences of response measures, and for capacity-building and technology transfer in the areas of mitigation and adaptation, where appropriate. To that end, each Annex II Party shall provide summary information in textual and tabular format (see tables 6, 7 and 8 below) on allocation channels and annual contributions for the previous two calendar or financial years, without overlapping with the previous reporting periods, including, as appropriate, the following:

- (a) The Global Environment Facility, the Least Developed Countries Fund, the Special Climate Change Fund, the Adaptation Fund, the Green Climate Fund and the UNFCCC Trust Fund for Supplementary Activities;
- (b) Other multilateral climate change funds;
- (c) Multilateral financial institutions, including regional development banks;
- (d) Specialized United Nations bodies;
- (e) Contributions through bilateral, regional and other channels.

53. Each Annex II Party shall provide the summary information referred to in paragraph 52 above for the previous two calendar or financial years in textual and tabular format on the annual financial support that it has provided for the purpose of assisting non-Annex I Parties, including the following:

- (a) The amount of financial resources (including the amount in original currency and its equivalent in United States dollars/international currency);
- (b) The type of support (for mitigation and adaptation activities);
- (c) The source of funding;
- (d) The financial instrument;
- (e) The sector;

(f) An indication of what new and additional financial resources it has provided pursuant to Article 4, paragraph 3, of the Convention, including clarification of how it has determined that such resources are new and additional.

54. Each Annex II Party shall provide detailed information on the assistance provided by it 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, in textual format and with reference to table 6 below.

55. Recognizing that the goal of mobilizing financial resources referred to in decision 1/CP.16, paragraph 98, includes private financial sources, each Annex II Party should report, to the extent possible, on private financial flows leveraged by bilateral climate finance towards mitigation and adaptation activities in non-Annex I Parties, and should report on policies and measures that promote the scaling up of private investment in mitigation and adaptation activities in developing country Parties.

56. Each Annex II Party should specify the types of instrument used in the provision of their assistance, such as grants and concessional loans.

**Table 6**  
**Provision of public financial support: summary information in 20XX-3<sup>a</sup>**

Allocation channel	Year								
	Domestic currency					USD <sup>b</sup>			
	Core/ general <sup>c,1</sup>	Climate-specific <sup>d,2</sup>				Core/ general <sup>c</sup>	Climate-specific <sup>d,2</sup>		
Mitigation		Adaptation	Cross-cutting <sup>e</sup>	Other <sup>f</sup>	Mitigation		Adaptation	Cross-cutting <sup>e</sup>	Other <sup>f</sup>
Total contributions through multilateral channels:									
Multilateral climate change funds <sup>g</sup>									
Other multilateral climate change funds <sup>h</sup>									
Multilateral financial institutions, including regional development banks									
Specialized United Nations bodies									
Total contributions through bilateral, regional and other channels									
<b>Total</b>									

*Note:* Explanation of numerical footnotes is provided in the documentation box after tables 6, 7 and 8.

*Abbreviation:* USD = United States dollars.

<sup>a</sup> Parties should fill in a separate table for each year, namely 20XX-3 and 20XX-2, where 20XX is the reporting year.

<sup>b</sup> Parties should provide an explanation of the methodology used for currency exchange for the information provided in tables 6, 7 and 8 in the documentation box.

<sup>c</sup> This refers to support provided to multilateral institutions that Parties cannot specify as being climate-specific.

<sup>d</sup> Parties should explain in their national communication how they define funds as being climate-specific.

<sup>e</sup> This refers to funding for activities that are cross-cutting across mitigation and adaptation.

<sup>f</sup> Please specify.

<sup>g</sup> Multilateral climate change funds listed in paragraph 52(a) of these guidelines.

<sup>h</sup> Other multilateral climate change funds as referred to in paragraph 52(b) of these guidelines.

Table 7  
**Provision of public financial support: contributions through multilateral channels in 20XX-3<sup>a</sup>**

	Total amount				Status <sup>b,3</sup>	Funding source <sup>4</sup>	Financial instrument <sup>5</sup>	Type of support <sup>6</sup>	Sector <sup>6,7</sup>
	Core/general <sup>d,1</sup>		Climate-specific <sup>e,2</sup>						
Donor funding	Domestic currency	USD	Domestic currency	USD	Committed Disbursed	ODA OOF Other <sup>f</sup>	Grant Concessional loan Non-concessional loan Equity Other <sup>f</sup>	Mitigation Adaptation Cross-cutting <sup>g</sup> Other <sup>f</sup>	Energy Transport Industry Agriculture Forestry Water and sanitation Cross-cutting Other <sup>f</sup> Not applicable
<b>Multilateral climate change funds</b>									
1. Global Environment Facility									
2. Least Developed Countries Fund									
3. Special Climate Change Fund									
4. Adaptation Fund									
5. Green Climate Fund									
6. UNFCCC Trust Fund for Supplementary Activities									
7. Other multilateral climate change funds									
<b>Subtotal</b>									
<b>Multilateral financial institutions, including regional development banks</b>									
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. Other									
<b>Subtotal</b>									

Table 7 (cont.)

**Provision of public financial support: contributions through multilateral channels in 20XX-3<sup>a</sup>**

	Total amount		Status <sup>b, 3</sup>	Funding source <sup>4</sup>	Financial instrument <sup>5</sup>	Type of support <sup>6</sup>	Sector <sup>c, 7</sup>
	Core/general <sup>d, 1</sup>	Climate-specific <sup>e, 2</sup>					
Donor funding	Domestic	Domestic	Committed Disbursed	ODA OOF Other <sup>f</sup>	Grant	Mitigation Adaptation	Energy
	USD	USD			Concessional loan		Transport
	currency	currency			Non-concessional loan	Cross-cutting <sup>g</sup>	Industry
					Equity	Other <sup>f</sup>	Agriculture
					Other <sup>f</sup>		Forestry
							Water and sanitation
							Cross-cutting
							Other <sup>f</sup>
							Not applicable
Specialized United Nations bodies							
1. United Nations Development Programme (specific programmes)							
2. United Nations Environment Programme (specific programmes)							
3. Other							
<b>Subtotal</b>							
<b>Total</b>							

Note: Explanation of numerical footnotes is provided in the documentation box after tables 6, 7 and 8.

Abbreviations: ODA = official development assistance, OOF = other official flows, USD = United States dollars.

<sup>a</sup> Parties should fill in a separate table for each year, namely 20XX-3 and 20XX-2, where 20XX is the reporting year.

<sup>b</sup> Parties should explain, in their national communication, the methodologies used to specify the funds as disbursed and committed. Parties will provide the information for as many status categories as appropriate in the following order of priority: disbursed and committed.

<sup>c</sup> Parties may select several applicable sectors. Parties may report sectoral distribution, as applicable, under "Other".

<sup>d</sup> This refers to support provided to multilateral institutions that Parties cannot specify as being climate-specific.

<sup>e</sup> Parties should explain in their national communication how they define funds as being climate-specific.

<sup>f</sup> Please specify.

<sup>g</sup> This refers to funding for activities that are cross-cutting across mitigation and adaptation.

**Table 8**  
**Provision of public financial support: contributions through bilateral, regional and other channels in 20XX-3<sup>a</sup>**

<i>Recipient country/ region/project/programme/activity<sup>b</sup></i>	<i>Total amount</i>		<i>Status<sup>c,3</sup></i>	<i>Funding source<sup>4</sup></i>	<i>Financial instrument<sup>5</sup></i>	<i>Type of support<sup>6</sup></i>	<i>Sector<sup>d,7</sup></i>	<i>Additional Information<sup>e</sup></i>
	<i>Domestic currency</i>	<i>USD</i>	<i>Committed Disbursed</i>	<i>ODA OOF Other<sup>g</sup></i>	<i>Grant Concessional loan Non-concessional loan Equity Other<sup>g</sup></i>	<i>Mitigation Adaptation Cross-cutting<sup>h</sup> Other<sup>g</sup></i>	<i>Energy Transport Industry Agriculture Forestry Water and sanitation Cross-cutting Other<sup>g</sup></i>	

*Note:* Explanation of numerical footnotes is provided in the documentation box after tables 6, 7 and 8.

*Abbreviations:* ODA = official development assistance, OOF = other official flows, USD = United States dollars.

<sup>a</sup> Parties should fill in a separate table for each year, namely 20XX-3 and 20XX-2, where 20XX is the reporting year.

<sup>b</sup> Parties should report, to the extent possible, on the details contained in this table.

<sup>c</sup> Parties should explain, in their national communication, the methodologies used to specify the funds as disbursed and committed. Parties will provide the information for as many status categories as appropriate in the following order of priority: disbursed and committed.

<sup>d</sup> Parties may select several applicable sectors. Parties may report sectoral distribution, as applicable, under "Other".

<sup>e</sup> Parties should report, as appropriate, on project details and the implementing agency.

<sup>f</sup> Parties should explain in their national communication how they define funds as being climate-specific.

<sup>g</sup> Please specify.

<sup>h</sup> This refers to funding for activities that are cross-cutting across mitigation and adaptation.

**Documentation box**

1: Core/general
2: Climate-specific
3: Status
4: Funding source
5: Financial instrument
6: Type of support
7: Sector
Each Party shall provide an indication of what new and additional financial resources it has provided and clarify how it has determined that such resources are new and additional. Please provide this information in relation to tables 7 and 8.

## **B. Technology development and transfer**

57. Each Annex II Party shall provide information on measures taken to promote, facilitate and finance the transfer of, access to and the deployment of climate-friendly technologies for the benefit of non-Annex I Parties and for the support of the development and enhancement of endogenous capacities and technologies of non-Annex I Parties. Parties shall, where feasible, report activities related to technology transfer, including success and failure stories, using table 9 below.

58. Each Annex II Party shall provide, in textual and tabular formats (see table 10 below), information on measures and activities related to technology transfer implemented or planned since its previous national communication or biennial report. In reporting such measures and activities, Annex II Parties shall, to the extent possible, provide information on the recipient country, the targeted area of mitigation or adaptation, the sector involved and the sources of technology transfer from the public or private sectors, and shall distinguish between activities undertaken by the public and private sectors. As the ability of Parties to collect adequate information on private-sector activities is limited, Parties may indicate, where feasible, how they have encouraged private-sector activities and how those activities help Parties to meet their commitments under Article 4, paragraphs 3, 4 and 5, of the Convention.

Table 9

**Description of selected projects or programmes that promoted practicable steps to facilitate and/or finance the transfer of, or access to, environmentally sound technologies**

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Project/programme title:

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Purpose:

---

Recipient country:	Sector:	Total funding:	Years in operation:
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Description:

---

Factors that led to project/programme's success:

---

Technology transferred:

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Impact on greenhouse gas emissions/removals (optional):

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Table 10  
**Provision of support for technology development and transfer<sup>a, b</sup>**

<i>Recipient country and/or region</i>	<i>Targeted area</i>	<i>Measures and activities related to technology transfer</i>	<i>Sector<sup>c</sup></i>	<i>Source of funding for technology transfer</i>	<i>Activities undertaken by</i>	<i>Status</i>	<i>Additional information<sup>d</sup></i>
	<i>Mitigation Adaptation Mitigation and adaptation</i>		<i>Energy Transport Industry Agriculture Water and sanitation Other</i>	<i>Private Public Private and public</i>	<i>Private Public Private and public</i>	<i>Implemented Planned</i>	

<sup>a</sup> To be reported to the extent possible.

<sup>b</sup> The table should include measures and activities implemented or planned since the previous national communication or biennial report.

<sup>c</sup> Parties may report sectoral disaggregation, as appropriate.

<sup>d</sup> Additional information may include, for example, information on funding for technology development and transfer provided, a short description of the measure or activity and information on cofinancing arrangements.

### **C. Capacity-building**

59. Each Annex II Party shall provide information, to the extent possible, on how it has provided capacity-building support that responds to existing and emerging capacity-building needs identified by non-Annex I Parties in the areas of mitigation, adaptation and technology development and transfer. Information should be reported in textual and tabular format (see table 11 below) as a description of individual measures and activities.

Table 11  
**Provision of capacity-building support<sup>a</sup>**

<i>Recipient country/region</i>	<i>Targeted area</i>	<i>Programme or project title</i>	<i>Description of programme or project<sup>b, c</sup></i>
	<i>Mitigation</i>		
	<i>Adaptation</i>		
	<i>Technology development and transfer</i>		
	<i>Multiple areas</i>		

<sup>a</sup> To be reported to the extent possible.

<sup>b</sup> Each Party included in Annex II to the Convention shall provide information, to the extent possible, on how it has provided capacity-building support that responds to existing and emerging capacity-building needs identified by Parties not included in Annex I to the Convention in the areas of mitigation, adaptation and technology development and transfer.

<sup>c</sup> Additional information may be provided on, for example, the measure or activity and cofinancing arrangements.

## **IX. RESEARCH AND SYSTEMATIC OBSERVATION**

60. Pursuant to Articles 4, paragraph 1(g) and (h), 5 and 12, paragraph 1(b), of the Convention, Annex I Parties shall communicate information on their actions relating to research and systematic observation.

61. The national communication shall address both domestic and international activities (for example, the activities of the Intergovernmental Panel on Climate Change, the World Climate Research Programme, Future Earth and the Global Climate Observing System) and also reflect action taken to support related capacity-building in developing countries.

62. Parties shall provide summary information on global climate observing system activities in accordance with paragraph 67 below. To guide the reporting under sections A and C below, Parties should refer to the detailed guidance provided in the revised “UNFCCC reporting guidelines on global climate observing systems” (annex to decision 11/CP.13) and any relevant decisions subsequently adopted by the COP.

63. The national communication should report, in summary form, on action taken. For example, the results of research studies, model runs or data analysis should not be included in this section.

### **A. General policy on and funding of research and systematic observation**

64. Parties should provide information on their general policy on and funding of research and systematic observation.

65. Parties should identify opportunities for and barriers to free and open international exchange of data and information and report on action taken to overcome such barriers.

### **B. Research**

66. Parties should provide, inter alia, information on highlights, innovations and significant efforts made with regard to:

- (a) Climate process and climate system studies, including paleoclimatic studies;
- (b) Modelling and prediction, including global and regional climate models;
- (c) Research on the impacts of climate change;
- (d) Socioeconomic analysis, including analysis of both the impacts of climate change and response options;
- (e) Research and development of mitigation and adaptation approaches, including technologies.

### **C. Systematic observation**

67. Parties should provide summary information on the current status of national plans, programmes and support for ground- and space-based climate observing systems, including long-term continuity of data, data quality control and availability, and exchange and archiving of data in the following areas:

- (a) Atmospheric climate observing systems, including those measuring atmospheric constituents;
- (b) Ocean climate observing systems;
- (c) Terrestrial climate observing systems;
- (d) Cryosphere climate observing systems;
- (e) Support for developing countries to establish and maintain observing systems and related data and monitoring systems.

## **X. EDUCATION, TRAINING AND PUBLIC AWARENESS**

68. In accordance with Articles 4, paragraph 1(i), 6 and 12, paragraph 1(b), of the Convention, Annex I Parties shall communicate information on their actions relating to education, training and public awareness. In this section, Parties should report, inter alia, on public information and education materials, resource or information centres, training programmes and participation in international activities. Parties may report on the extent of public participation in the preparation or domestic review of the national communication.

69. The national communication may present information on such aspects as:

- (a) General policy on education, training and public awareness;
- (b) Primary, secondary and higher education;
- (c) Public information campaigns;
- (d) Training programmes;
- (e) Resource or information centres;
- (f) Involvement of the public and non-governmental organizations;
- (g) Participation in international activities;
- (h) Monitoring, review and evaluation of the implementation of Article 6 of the Convention.

## **XI. UPDATING OF THE GUIDELINES**

70. These guidelines shall be reviewed and revised, as appropriate, in accordance with relevant COP decisions.

## **XII. STRUCTURE OF THE NATIONAL COMMUNICATION**

71. The information identified in these guidelines shall be communicated by each Party in a single document in one of the official languages of the United Nations. Parties shall provide an electronic version of their national communication to the secretariat through the appropriate UNFCCC submission system. The length of the national communication may be decided by the submitting Party, but every effort shall be made to avoid overlengthy national

communications, in order to facilitate the consideration process. [Parties are encouraged to submit, where appropriate, an English translation of the national communication to facilitate its use in the review process, recognizing that this may place an additional burden on the Party.]

72. Where supplementary documents are provided as annexes to the national communication, the annexes are considered as part of the national communication itself. A clear reference to the relevant information in the annexes should be provided in the main text of the national communication.

73. Where statistical data are provided, they should be accompanied by a definition of terms, unless they are obvious.

74. To facilitate the transparency, comparability and consistency of national communications, Parties shall organize the content of their national communication following the outline contained in the annex and may rephrase the subsection headings as appropriate and explain the reasons for rephrasing. To ensure completeness, no mandatory element shall be excluded. If mandatory elements cannot be reported for any reason, the Party shall explain the reason for partial reporting in the section relating to those elements.

**Annex**

**STRUCTURE OF THE NATIONAL COMMUNICATION**

- I. EXECUTIVE SUMMARY
- II. NATIONAL CIRCUMSTANCES RELEVANT TO GREENHOUSE GAS EMISSIONS AND REMOVALS
- III. GREENHOUSE GAS INVENTORY INFORMATION
  - A. Summary tables
  - B. Descriptive summary
  - C. National inventory arrangements
- IV. POLICIES AND MEASURES
  - A. Policymaking process
  - B. Policies and measures and their effects
  - C. Policies and measures no longer in place
- V. PROJECTIONS AND TOTAL EFFECT OF POLICIES AND MEASURES
  - A. Projections
  - B. Assessment of aggregate effect of policies and measures
  - C. Methodology
- VI. VULNERABILITY ASSESSMENT, CLIMATE CHANGE IMPACTS AND ADAPTATION MEASURES
- VII. FINANCIAL, TECHNOLOGICAL AND CAPACITY-BUILDING SUPPORT
  - A. Finance
  - B. Technology development and transfer
  - C. Capacity-building
- VIII. RESEARCH AND SYSTEMATIC OBSERVATION
  - A. General policy on and funding of research and systematic observation
  - B. Research
  - C. Systematic observation

IX. EDUCATION, TRAINING AND PUBLIC AWARENESS

ANNEX. Supplementary documents

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