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

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

Progress report on the work of the Consultative Group of Experts on National Communications from Parties not included in Annex I to the Convention: concept note on the e-learning programmes on the preparation of national communications from Parties not included in Annex I to the Convention

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

Summary

The Consultative Group of Experts on National Communications from Parties not included in Annex I to the Convention (CGE) held its 7th meeting in Accra, Ghana, from 17 to 19 September 2012. The CGE considered the progress on the implementation of its work programme between April and September 2012, including developing a concept note on the e-learning programmes on the preparation of national communications from Parties not included in Annex I to the Convention. This report contains the concept note on the proposed e-learning programmes, including the objectives, scope, possible beneficiaries, curriculum, and access and delivery options.

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I. Background and mandate

1. All Parties to the Convention are required to periodically submit to the Conference of the Parties (COP), in accordance with Article 4, paragraph 1, and Article 12, paragraph 1, of the Convention a report containing information on the following elements:

(a) A national inventory of anthropogenic emissions by sources and removals by sinks of all greenhouse gases (GHGs) not controlled by the Montreal Protocol, to the extent the Party's capacities permit, using comparable methodologies to be promoted and agreed upon by the COP;

(b) A general description of steps taken or envisaged by the Party to implement the Convention;

(c) Any other information that the Party considers relevant to the achievement of the objective of the Convention and suitable for inclusion in its communication, including, if feasible, material relevant for calculations of global emission trends.

2. Parties not included in Annex I to the Convention (non-Annex I Parties) prepare their national communications following the "Guidelines for the preparation of national communications from Parties not included in Annex I to the Convention" contained in the annex to decision 17/CP.8.¹

3. The COP, at its fifth session, established the Consultative Group of Experts on National Communications from Parties not included in Annex I to the Convention (CGE) with the objective of improving the process of, and the preparation of, national communications by non-Annex I Parties.²

4. The COP, at its fifteenth session, reconstituted the CGE for a period of three years, from 2010 to 2012.³

5. As per its current terms of reference, the CGE is mandated to, inter alia, provide technical assistance to non-Annex I Parties for the regular development of national GHG inventories, vulnerability and adaptation (V&A) assessment, mitigation assessment, research and systematic observation, education, training and public awareness, technology transfer and capacity-building, with a view to improving the accuracy, consistency and transparency of information in their national communications.⁴

6. In response to the mandate referred to in paragraph 5 above, the CGE, in its work programme for 2010–2012,⁵ identified the development and implementation of e-learning programmes as one of the activities to be implemented as a part of the update of CGE training materials on national communications, including national GHG inventories, V&A assessment and mitigation assessment.⁶

7. The CGE, at its 6th meeting, agreed that the e-learning programmes would be developed on the basis of the updated CGE training materials, covering the preparation and

¹ Decision 13/CP.9 encourages non-Annex I Parties to apply good practice guidance for land use, land-use change and forestry, as appropriate and to the extent possible, in the preparation of GHG inventories to be included in national communications.

² Decision 8/CP.5.

³ Decision 5/CP.15.

⁴ Decision 5/CP.15, annex, paragraph 2(a).

⁵ The work programme of the CGE for 2010–2012 is contained in annex I of document FCCC/SBI/2010/INF.2.

⁶ The current CGE training materials are available at <http://unfccc.int/national_reports/non-annex_i_natcom/training_material/methodological_documents/items/349.php>.

elaboration of national communications, including national GHG inventories, V&A assessment, mitigation assessment and other cross-cutting issues. The CGE, at its 6th meeting, began consideration of the scope, content and target audience of the e-learning programmes. The CGE agreed to continue consideration of this issue at its 7th meeting, planned to be held in September 2012, by which time the revision of the CGE training materials, which would form the basis for the e-learning programmes, was expected to be finalized.⁷

8. The Subsidiary Body for Implementation (SBI) welcomed the plan of the CGE in 2012 to develop and implement e-learning programmes, based on the updated training materials, and to establish a web-based network of experts.⁸

9. Furthermore, in adopting⁹ the “UNFCCC biennial update reporting guidelines for Parties not included in Annex I to the Convention”, the COP, at its seventeenth session, recognized that the CGE could also play an important role in facilitating technical advice and support for the preparation and submission of the first biennial update reports.

II. Objective

10. The objectives of the CGE e-learning programmes are the following:

(a) To enhance the capacity and increase the pool of national experts from non-Annex I Parties involved in the process of, and the preparation of, national communications, as well as other stakeholders;

(b) To enhance the availability and cost-effectiveness of training, complementing and building on regional workshops organized by the CGE.

III. Scope

11. Overall, the CGE e-learning programmes will build upon the updated CGE training materials and will cover all the areas of information to be reported in national communications from non-Annex I Parties.

12. In updating the training materials, the CGE will take fully into consideration the invitation of the SBI to take into account the current and future needs of non-Annex I Parties and to take into consideration the provisions under the Convention and the relevant decisions of the COP.

IV. Beneficiaries

13. The CGE e-learning programmes target national communication managers, sectoral experts and other stakeholders from non-Annex I Parties involved in the preparation of their national communications. The possible beneficiaries and/or target audience for each of the areas are as shown in the table below. The e-learning programmes could also benefit other stakeholders, including, but not limited to, development planners, ministries of finance, policymakers, non-governmental organizations, financiers, national statistical

⁷ FCCC/SBI/2012/2, paragraph 19.

⁸ FCCC/SBI/2012/15, paragraph 40.

⁹ Decision 2/CP.17.

agencies, professional associations, public and private enterprises, researchers and academics.¹⁰

14. Other experts and stakeholders involved in different sectors and institutions that work on climate change related issues could also benefit from the materials provided through the e-learning programmes. The CGE e-learning programmes could provide good insight on climate actions for a wide range of institutions and experts, and thus they could also be important beneficiaries.

Possible beneficiaries and/or target audience for the Consultative Group of Experts e-learning programmes

<i>Component</i>	<i>Target audience</i>
Introduction and overview	National communication coordinators and managers National climate change committee members National focal points
National greenhouse gas inventories	National inventory team leaders Greenhouse gas inventory sectoral experts Greenhouse gas inventory sectoral (activity data, emission factors) data owners and/or providers
Mitigation assessment	Team leaders for national mitigation assessments Mitigation sectoral experts Mitigation sectoral data owners/providers
Vulnerability and adaptation assessment	Team leaders for national vulnerability and adaptation assessments Vulnerability and adaptation sectoral experts Vulnerability and adaptation sectoral data owners and/or providers
Cross-cutting themes	National communication coordinators and/or managers National focal points

Note: The e-learning programmes could also benefit other stakeholders.

V. Curriculum

15. The e-learning programmes will include the following five components:

- (a) Component 1: introduction and overview;
- (b) Component 2: national GHG inventories;
- (c) Component 3: V&A assessment;
- (d) Component 4: mitigation assessment;
- (e) Component 5: cross-cutting themes.

¹⁰ The list of possible beneficiaries and/or target audience and other stakeholders is presented as an example and is not intended to be exhaustive.

A. Component 1: introduction and overview

16. The introduction and overview component will cover a range of issues that may be relevant to the process of, and the preparation of, national communications from non-Annex I Parties:

- (a) Module I: an overview of UNFCCC reporting guidelines adopted under the Convention for non-Annex I Parties;
- (b) Module II: introduction to climate change (the state of knowledge on climate change, sources, sinks and sectors of GHG emissions).

B. Component 2: national greenhouse gas inventories

17. Following the outline of the CGE training materials, the courses on national GHG inventories to be developed will broadly comprise the following:

- (a) Module I: general guidance on cross-cutting issues, including building sustainable national GHG inventory management systems, use of the Intergovernmental Panel on Climate Change (IPCC) *Good Practice Guidance and Uncertainty Management in National Greenhouse Gas Inventories*, documentation of activity data, emission factors and methods used, IPCC emission factor database and other international databases available online, quality assurance and quality control, archiving systems, key category analysis, uncertainty analysis, national inventory improvement plan and addressing data gaps;
- (b) Module II: energy sector, covering the sources and activities (fossil fuel consumption, including transport, and fugitive emissions), basic emission processes, reference approach and sectoral approach, choice of activity data, emission factors and methods used, relationships with other sources and sectors, quality control and completeness, uncertainty assessment, UNFCCC software and reporting tables, conversion tools and hands-on exercises;
- (c) Module III: industrial processes sector, covering the sources and activities (non-energy related physical and chemical processes, and consumption of fluorinated gases), basic emission processes, choice of activity data, emission factors and methods used, relationships with other sources and sectors, quality control and completeness, uncertainty assessment, UNFCCC software and reporting tables, conversion tools and hands-on exercises;
- (d) Module IV: agriculture sector, covering the sources and activities, basic emission processes, choice of activity data, emission factors and methods used, relationships with other sources and sectors, quality control and completeness, uncertainty assessment, UNFCCC software and reporting tables, conversion tools and hands-on exercises;
- (e) Module V: land use, land-use change and forestry sector, covering the sources and sinks, basic emission and sequestration processes, choice of activity data, emission factors and methods used, relationships with other sources and sectors, quality control and completeness, uncertainty assessment, UNFCCC software and reporting tables, conversion tools and hands-on exercises;
- (f) Module VI: waste sector, covering the sources and activities, basic emission processes, choice of activity data, emission factors and methods used, quality control and completeness, uncertainty assessment, UNFCCC software and reporting tables, conversion tools and hands-on exercises.

18. Each of the modules will need to be converted into a narrative online course on the basis of the CGE training materials on national GHG inventories.

C. Component 3: vulnerability and adaptation assessment

19. There is no recommended set of methodologies under the Convention for V&A assessments, as non-Annex I Parties are encouraged to use appropriate methodologies and guidelines that they consider better reflect their national circumstances, provided that the methodologies and guidelines are consistent, transparent and well documented.

20. The curriculum will be developed based on the outline of the CGE training materials, using broad approaches and methodologies primarily developed by the IPCC, the United Nations Environment Programme and the United Nations Development Programme.

21. The curriculum will consist of a general section in which the participants will be introduced to the basic concepts of V&A assessment and relevant thematic sections in which the participants will get an in-depth training on a particular sectoral issue. The outline of the V&A assessment curriculum will be as follows:

(a) Module I: introduction to V&A assessment, introduction to climate change, key terminologies and concepts used in conducting V&A assessments, the purpose and rationale of such assessments and identification of the various options that can be taken into consideration when undertaking a V&A assessment;

(b) Module II: V&A assessment frameworks. The participants will be provided with an overview on planning for V&A assessments and different practical V&A frameworks, thus giving them an overview on how to select an appropriate and suitable V&A framework for their country, depending on the specific national circumstances. The participants will be referred to literature on the subjects related to relevant V&A assessment and impact frameworks;

(c) Module III: scenarios:

(i) Socioeconomic: understanding the key terms and concepts and an overview of socioeconomic scenarios, an overview of developing socioeconomic scenarios and information on the data required to develop those scenarios;

(ii) Climate change: understanding the key terms and concepts and an overview of climate change scenarios, general approaches used for constructing climate change scenarios for impact assessment, basic introduction to the input and output of general circulation models and regional climate models and their advantages and limitations, giving the participants a basic understanding, introduction to basic statistical tools to generate climate change scenarios, and introduction to other available methods and tools and data sources necessary for generating climate change scenarios. The participants will be referred to the latest literature on the subject related to climate change scenarios, such as the IPCC's recent work on representative concentration pathways;

(d) Module IV: sectoral training. The module will cover V&A assessments in four sectors: water resources, agriculture, human health and coastal resources:

(i) Water resources: understanding the key terms and concepts and an overview of water resources in the context of climate change, introduction to the potential hydrological impacts of climate change on water resources and a step-by-step guide, including methods, tools and data required for conducting impact assessments on water resources, identification of the various stakeholders involved in the water sector and their potential influence on water resources and water planning, outline of

common adaptation options in water resources and introduction to the methods and tools used in water resource planning and management;

(ii) Agriculture: understanding the key terms and concepts and an overview of agriculture, overview of climate change impacts on agriculture and food security, identification of the various stakeholders involved in the agriculture sector and their potential influence on the agriculture sector and agriculture planning, outline of common adaptation options in the agriculture sector, introduction to commonly used process-based and statistical methods, tools and models, with a focus on conducting sensitivity analyses, and developing seasonal adaptation measures;

(iii) Human health: understanding the key terms and concepts and an overview of human health, overview of the key drivers and their potential impacts on human health, identification of the various stakeholders involved in the health sector and their potential influence on the health sector and human health planning, outline of common adaptation options in the health sector and introduction to commonly used methods and tools for assessing the impacts of climate change on human health, including determining the appropriate adaptive response baseline;

(iv) Coastal resources: understanding the key terms and concepts and an overview of coastal resources, identification of the key drivers and potential impacts of climate change on coastal zones, identification of the various stakeholders involved with coastal resources and their potential influence on coastal resources and coastal zone planning, outline of common adaptation options in coastal zones, overview of the methodological approaches and the tools and data available to assess the impact of climate change on coastal zones and seasonal sea level variability and change;

(e) Module IV: introduction to integration both across and within the sectors in the framework of V&A assessment, introduction to cross-sectoral integration concepts and approaches and the importance of linkage with economic development, in particular to land-use planning, an overview of the methods used for ranking vulnerabilities and adaptation across sectors and how to prioritize the adaptation options and integrate them with national policies;

(f) Module V: overview of relevant provisions under the Convention on reporting information on V&A from non-Annex I Parties and good practice guidance on presenting the results of the V&A assessment, using examples from recently submitted national communications.

D. Component 4: mitigation assessment

22. The following modules cover a broad range of mitigation assessment related issues that provide background general information that people may use in their reporting process, depending on their specific needs, capabilities and national circumstances.

23. In addition to the provisions under the mitigation section of the “Guidelines for the preparation of national communications from Parties not included in Annex I to the Convention”, the modules will provide indicative material that may be useful for conducting mitigation assessments with a view to improving the accuracy, consistency and transparency of information.

24. Following the outline of the CGE training materials, the courses on mitigation assessment to be developed will broadly comprise the following:

(a) Module I: mitigation in the context of national communications, covering national communications and the mitigation components, experiences and lessons learned

with mitigation components and recent developments related to mitigation by developing country Parties under the Convention;

(b) Module II: mitigation assessment, concepts, structure and steps, covering the purpose and objectives of conducting mitigation assessments, steps for conducting a mitigation assessment and translating mitigation assessments into national climate plans;

(c) Module III: mitigation options, issues and barriers by sector, covering the key sectors related to GHG mitigation as well as cross-sectoral opportunities for GHG mitigation, including emissions sources, trends and drivers by sector and region, mitigation technologies and strategies, policies and measures for their adoption and implementation, and common barriers, potential solutions and general considerations for mitigation strategies;

(d) Module IV: mitigation analysis, methods and tools, covering an introduction to different approaches for GHG mitigation assessment, including reviewing the benefits and drawbacks of different approaches, introducing software tools that may be useful for GHG mitigation analysis and providing information to help national experts to choose an appropriate tool for their own assessments;

(e) Module V: reporting mitigation in national communications, covering reporting commitments and guidelines under the Convention for non-Annex I Parties and suggestions for reporting relevant information on mitigation in national communications;

(f) Module VI: documentation toolkit for developing and maintaining a system for mitigation assessment;

(g) Module VII: exercise and test cases. The module will be a simple spreadsheet-based exercise in which the participants develop GHG mitigation cost curves for various GHG mitigation policies in a fictitious country, perform an overall screening of GHG mitigation options using multicriteria attribute analysis and construct a simple mitigation scenario in the Long-range Energy Alternatives Planning system (based on the options they previously identified in the first two screening exercises).

25. Each of the modules will need to be converted into a narrative online course on the basis of the CGE training materials on mitigation assessment.

E. Component 5: cross-cutting themes

26. This component of the training programmes covers a range of cross-cutting themes that may be addressed in the preparation of national communications from non-Annex I Parties.

(a) Module I: other information considered relevant to the achievement of the objective of the Convention, including the following:

(i) Part A: steps taken to integrate climate change considerations into relevant social, economic and environmental policies and actions;

(ii) Part B: activities related to the transfer of, and access to, environmentally sound technologies and know-how, the development and enhancement of endogenous capacities, technologies and know-how, and measures relating to enhancing the enabling environment for the development and transfer of technologies;

(iii) Part C: climate change research and systematic observation, including participation in and contribution to activities and programmes, as appropriate, of national, regional and global research networks and observing systems;

- (iv) Part D: information on research programmes, containing measures to both mitigate and adequately adapt to climate change as well as the development of emission factors and activity data;
- (v) Part E: information on climate change education, training and public awareness;
- (vi) Part F: capacity-building, including information on how capacity-building activities are being implemented in accordance with decision 2/CP.7 and information on capacity-building activities for integrating adaptation to climate change into planning processes;
- (vii) Part G: information on efforts to promote information sharing, including the participation of and contribution to networks and access to, and use of, information technology for information exchange;
- (b) Module II: identification of elements relating to institutional arrangements for the preparation of national communications, including the following:
 - (i) Part A: identification and description of the institutions responsible for national communications, both direct and indirect, including entities that may have an indirect role in the preparation of national communications, such as those involved in the validation of data used in different studies or that may participate in national communications in an ad hoc manner, and identification of the roles and areas of work of each institution;
 - (ii) Part B: information on coordination mechanisms, including a depiction of coordination, or lines of communication, among the different participating institutions. It will include a brief description of the national climate change steering committee and/or national communication steering committee, if any. The description may include the functions of steering committees, members, procedures and coordination with other relevant groups, as appropriate;
 - (iii) Part C: information on the peer review processes for the review and approval of national communications before submission to the secretariat and information on the consultative process.

VI. Access and delivery

27. The preparation of national communications from non-Annex I Parties is a comprehensive exercise and the elements contained in Article 12, paragraph 1, of the Convention should be considered in a holistic manner. Therefore, if the participants are to complete the modules in sequence, there should be a stand-alone introductory general module on climate change, which should cover general aspects of all the elements.
28. The CGE e-learning training programmes will be delivered as an online web-based course with five different components. The participants will comprise those relevant national experts identified as the target audience in the table above and as nominated by the national focal points for the Convention.
29. The participants are encouraged to replicate and adapt the information in their countries, based on national circumstances, gaps, constraints and capabilities.
30. The complete training package may also be available offline on suitable electronic media storage devices.
31. Each component of the training programme will be designed to include substantive materials, examples, exercises and quizzes. Wherever necessary and applicable, the

narratives could be further supplemented by short audiovisual materials and/or by providing links to additional reference materials.

32. Registered participants of the e-learning programmes will get access to the web-based e-network for national communications from non-Annex I Parties.

33. Each session of the training component will be open to a maximum of 40 registered participants for a period of two months. Such a session can be run three to four times a year. Instructors may be made available remotely for each of the sessions to address any questions that the online participants may have.

34. The initial version will be developed, reviewed, tested and deployed in English. Once the substantive content and the technical design mature sufficiently, the training programme can be developed in other United Nations official languages.
