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UNITED NATIONS FRAMEWORK CONVENTION ON CLIMATE CHANGE

Subsidiary Body for Scientific and Technological Advice
Thirty-sixth session
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Item 6 of the provisional agenda
Research and systematic observation

Views on specific themes to be addressed at the research dialogue, including information on technical and scientific aspects of emissions and removals of all greenhouse gases from coastal and marine ecosystems

Submissions from Parties

Addendum

1. In addition to the five submissions contained in document FCCC/SBSTA/2012/MISC.2, two further submissions have been received.

2. In accordance with the procedure for miscellaneous documents, these submissions are attached and reproduced* in the language in which they were received and without formal editing.

* These submissions have been electronically imported in order to make them available on electronic systems, including the World Wide Web. The secretariat has made every effort to ensure the correct reproduction of the texts as submitted.

Contents

Paper no. 1: Bangladesh, Cameroon, Central African Republic, Congo, Costa Rica, Côte d'Ivoire, Democratic Republic of the Congo, Dominica, Dominican Republic, Fiji, Gabon, Ghana, Guyana, Honduras, Kenya, Pakistan, Panama, Papua New Guinea, Sierra Leone, Solomon Islands, Suriname and Uganda

Submission by

Bangladesh, Cameroon, Central African Republic, Congo (Republic), Costa Rica, Cote d'Ivoire, Democratic Republic of Congo, Dominica, Dominican Republic, Fiji, Gabon, Ghana, Guyana, Honduras, Kenya, Pakistan, Panama, Papua New Guinea, Sierra Leone, Solomon Islands, Suriname and Uganda

Views on the research dialogue, including ongoing activities, associated modalities and ways to enhance the dialogue on Coastal Marine Ecosystems as requested by the SBSTA at its thirty-fifth session

29 February 2012

1. The SBSTA at its 35th session invited Parties to submit, by 5 March 2012, their views on specific themes to be addressed at the upcoming research dialogue meeting to be held in conjunction with the thirty-sixth session of the SBSTA[1]. The SBSTA also invited Parties and regional and international research programmes and organizations active in climate change research, including marine research, to provide information on the technical and scientific aspects of emissions by sources, removals by sinks, and reservoirs of all greenhouse gases, including emissions and removals from coastal marine ecosystems such as mangroves, tidal salt marshes, wetlands and seagrass meadows, with a view to identifying and quantifying the impact of human activities. This information would be considered as a theme for the next research dialogue, also taking into account the submissions received by 5 March 2012. At its thirty-sixth session, the SBSTA may consider the need for a workshop to give in-depth consideration to the themes considered in the research dialogue.

2. For this purpose the Coalition for Rainforest Nations and a number of like-minded developing countries met in London, England on 29 February and 1 March 2012, to consider issues related to the research dialogue, including ongoing activities, associated modalities and ways to enhance the dialogue, in particular on coastal marine ecosystems, such as mangroves, tidal salt marshes and seagrass meadows. Countries also addressed the issue of coastal marine ecosystems with respect to matters related to systematic observation. This submission has been prepared to reflect those discussions and views from many other developing country Parties on ways to enhance the research dialogue with the aim to provide opportunities for engaging with the coastal marine scientific community to present ongoing scientific findings relevant to the needs of the Convention in particular for conservation and enhancement of coastal marine ecosystems sinks and reservoirs.

[1] Report of the SBSTA on its thirty-fourth session, Research and systematic observation, Draft conclusions proposed by the Chair, FCCC /SBSTA/2011/L.27.

Part I – Research dialogue

3. The submission of views to SBSTA35 made on 19 September 2011 by *Belize, Cameroon, Central African Republic, Costa Rica, Cote d'Ivoire, Democratic Republic of Congo, Dominican Republic, Ecuador, Gabon, Ghana, Guatemala, Guyana, Honduras, Kenya, Panama, Papua New Guinea, Republic of Congo, Solomon Islands, Togo, and Uganda* on views on the research dialogue, including ongoing activities, associated modalities and ways to enhance the dialogue on Coastal Marine Ecosystems included in document FCCC/SBSTA/2011/MISC.8/Add.1 should be recalled.

4. **Significant Role in Adaptation and Mitigation:** Coastal and marine ecosystems play a significant role in adaptation to and mitigation of climate change. Coastal wetlands such as mangroves, marshes, and seagrass meadows are significant carbon sinks and provide a number of ecosystem services including habitats for many species of fish and shellfish, protection from storms, tidal surges, and other extreme events, influences on water quality, aesthetics, and biodiversity. The rates of sequestration of greenhouse gases by these ecosystems may be up to 50% more than terrestrial ecosystems; among the highest of any ecosystem on Earth. Therefore conservation and sustainable use should be promoted with the aim to stop their degradation and reduce vulnerability to climate change. Coastal marine ecosystems also provide substantial support to coastal communities that results in poverty reduction, improvements in the welfare of coastal communities and facilitates the adaption to adverse effects of climate change.

5. **Significant Carbon Stocks:** Carbon stocks of coastal ecosystems can be as much as 5 times that of upland forests[2] because of the numerous values of coastal wetlands and it is ironic that rates of degradation largely relating to coastal land use/land cover change are among the highest on earth. The greenhouse gas emissions arising from conversion of coastal wetlands are exceptionally high because the stocks that have been accumulating in place for thousands of years. Thus, the combination of very high Carbon stocks, high rates of land cover change, high degree of vulnerability to climate change and numerous ecosystem services underscores the values of coastal wetlands for adaptation and mitigation.

6. **Numerous Co-Benefits:** Any adaptation and mitigation strategies that result in the protection, enhancement restoration of intact coastal ecosystems would have numerous co-benefits. Intact ecosystems are most buffered and resilient due to disturbances relating to climate change.

7. **Theme for Research Dialogue:** At the upcoming research dialogue meeting to be held in conjunction with the thirty-sixth session of the SBSTA, sufficient time should be allocated to discuss the technical and scientific aspects of emissions by sources, removals by sinks, and reservoirs of all greenhouse gases, including emissions and removals from coastal and marine ecosystems such as mangroves, tidal salt marshes, and seagrass meadows, with a view to identifying and quantifying the impact of human activities. This should be considered as a theme at the upcoming research dialogue meeting to be held in conjunction with the thirty-sixth session of the SBSTA.

[2] Donato, D.C.; Kauffman, J.B.; Murdiyarso, D.; Kurnianto, S.; Stidham, M.; Kanninen, M. 2011. Mangroves among the most carbon-rich forests in the tropics. Nature Geosciences. 4:293–297.

8. **Encourage Provision of Data:** The SBSTA should invite Parties, secretariats of relevant international conventions, and regional and international research programmes and organizations active in climate change research, especially in coastal marine research, to provide information and exchange views at the upcoming research dialogue meeting to be held in conjunction with the thirty-sixth session of the SBSTA in accordance with paragraph 7 above.

9. **Call for Workshop:** The SBSTA at its thirty-sixth session should consider the need for a workshop to give in-depth consideration to the theme of Coastal Marine Ecosystems to be held before SBSTA37 in Honduras with a view to providing information to support the UNFCCC process.

10. The workshop referred to in paragraph 9 above should describe and discuss progress and developments in research activities relevant to the technical and scientific aspects of greenhouse gas emissions by sources, removals by sinks, and reservoirs of coastal and marine ecosystems such as mangroves, tidal salt marshes, and seagrass meadows, with a view to identifying and quantifying the impact of human activities.

11. In particular, the workshop referred to in paragraph 9 above should:

- Consider the scientific progress on Coastal Marine Ecosystems to date relative to the adapation to and mitigation of climate change;
- Consider the IPCC state of work about the supplementary report to IPCC Guidelines for national GHG inventories in wetlands;
- Assess peer reviewed documents and data collection/avaibility with the view to inform the IPCC process;
- Identify relevant default values for carbon stocks and emissions of Coastal Marine Ecosystems Tier 1;
- Investigate research needs that would allow IPCC Tier 2 to 3 levels of carbon accounting in coastal ecosytems;;
- Estimate costs and describe the approaches to the measurment and monitoring of Coastal Marine Ecosystems.

12. **Consider Work Programme:** The SBSTA should also invite the IPCC, subject to availability of funds, to initiate a work programme aimed at quantifying the role of coastal marine ecosystems on global atmospheric fluxes of greenhouse gasses. This should also include analysis of the vulnerability of coastal marine ecosystems to climate change.

Part II – Systematic observation

13. Accurate carbon monitoring, reporting and verification systems are essential for the process of quantifying the impact and efficiency of climate change mitigation and adaptation strategies. To this aim, the contribution of networks for the monitoring and reporting of greenhouse gas emissions by sources, removals by sinks, and reservoirs of coastal and marine ecosystems such as mangroves, tidal salt marshes, and seagrass meadows should be addressed by SBSTA, in particular the role of the Global Climate Observing System (GCOS).

Paper no. 2: Japan

Japan's submission on the research dialogue

Japan would like to present at the forthcoming research dialogue during SBSTA36 Japanese ongoing activity on greenhouse-gases monitoring from outer space, especially a Greenhouse-gases Observing SATellite – GOSAT, which had a substantial development to be considered for the research dialogue.

Japan launched the satellite, GOSAT, in 2009 and has been carrying out its mission for 3 years as the only operating monitoring satellite exclusively for greenhouse-gases emission in the world.

The results, such as global observation with an uniform quality by only one sensor, with reduced blank area, and reduced estimation error of the CO2 absorption and emission by subcontinent level, contribute to the future climate change science and global warming countermeasures to a certain extent.

For example, products of CO2 absorption and emission by subcontinent level are planned to be released this summer. Beforehand, in the SBSTA dialogue, the observation data by GOSAT, and its potential contribution to climate science and the UNFCCC can be presented.

As the satellite observations are also under planning in Europe and America, it may be possible to set up the international cooperation on data calibration and its analysis in the future. In the dialogue, it is, therefore, expected to discuss possible contribution to the UNFCCC through data from outer space which reveals the net emission by countries.