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UNITED NATIONS FRAMEWORK CONVENTION ON CLIMATE CHANGE

**Subsidiary Body for Scientific and Technological Advice**

**Thirty-fifth session**

**Durban, 28 November to 3 December 2011**

Item 3 of the provisional agenda

**Nairobi work programme on impacts, vulnerability and adaptation to climate change**

**Proposals for upcoming activities under the Nairobi work programme on impacts, vulnerability and adaptation to climate change**

**Submissions from Parties and relevant organizations**

1. The Subsidiary Body for Scientific and Technological Advice (SBSTA), at its thirty-fourth session, requested Parties and relevant organizations to submit to the secretariat, by 19 September 2011, their proposals for upcoming activities under the Nairobi work programme on impacts, vulnerability and adaptation to climate change, taking into consideration the information included in annex I to the report on its thirty-fourth session.<sup>1</sup>

2. The SBSTA requested the secretariat to compile these submissions into a miscellaneous document for consideration by the SBSTA at its thirty-fifth session.

3. The secretariat has received 12 such submissions. In accordance with the procedure for miscellaneous documents, the five submissions from Parties<sup>2</sup> and the two submissions from United Nations organizations<sup>3</sup> are attached and reproduced\* in the languages in which they were received and without formal editing. In line with established practice, the five submissions from non-governmental organizations have been posted on the UNFCCC website.<sup>4</sup>

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<sup>1</sup> FCCC/SBSTA/2011/2, paragraph 25.

<sup>2</sup> Also made available at <<http://unfccc.int/5901.php>>.

<sup>3</sup> Also made available at <<http://unfccc.int/3714.php>>.

\* 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.

<sup>4</sup> <<http://unfccc.int/3689.php>>.

**FCCC/SBSTA/2011/MISC.6**

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\* This submission is supported by Albania, Croatia, Iceland, Montenegro, Serbia and the former Yugoslav Republic of Macedonia.

## Paper no. 1: Colombia

### **Submission from Colombia of Views on proposals on upcoming activities under the Nairobi work Programme – NWP.**

The Colombian Government welcomes the opportunity to present its views on potential activities under the Nairobi Work Programme - NWP on impacts, vulnerability and adaptation to climate change, and presents recommendations on the following issues:

#### **General suggestions:**

The dissemination of the NWP products, guidelines and workshops has largely been targeted at policy makers at national levels, and has not been as responsive to the information and knowledge needs at local levels. Thus has constituted a barrier to assisting local stakeholders to implement and formulate adaptation actions in line with national policies. Therefore renewed efforts would need to be undertaken, focused on local stakeholders and promoting methodologies that take into account regional and sub-national circumstances.

#### **Main issues to take into account for further activities on the implementation of the Nairobi Work Program:**

In order to involve directly communities and decision makers at local levels on workshops and other activities under the NWP, Colombia would like to highlight the elements below:

The definition of specific country focal points of the NWP is an essential tool that should be strengthened in order to guarantee that all the information and products produced for the NWP, really reach the community and decision makers at local levels. This initiative could be developed in a better way, defining a roadmap among focal points, which would be tasked with disseminating activities, selected for each country in order to achieve the objectives of diffusion and awareness of the NWP.

More focus needs to be placed on targeting local audiences, and developing facilitating tools for community based adaptation.

#### **Upcoming activities proposal:**

Development and assessment of current methodologies and practices for measuring and monitoring adaptation actions, especially regarding the definition and use of different policy impact indicators in order to facilitate the establishment and harmonization of objectives both at national and local levels. This assessment should specifically integrate environmental, social and economic indicators for measuring vulnerability, resilience and adaptive capacities in policy implementation.

Given that Technology Transfer would be considered as one of the central financing windows under the Green Climate Fund, and the significant linkages of the Technology mechanisms with the Adaptation Committee, NAPs and other elements under the Convention, there are concerns regarding the implementation of technology transfer projects for adaptation. Programming under GEF clearly reflects the significant imbalance between adaptation and mitigation technology transfer projects, and this is largely due to limited understanding in developing countries regarding appropriate technologies for adaptation and what exactly is a “technology” when is about adaptation. Hence, there should be a clear linkage between the products and upcoming activities under the NWP with the functions developed by the Technology Mechanism.

Therefore, Colombia expresses the urgent need to continue working on strengthening the capacity building for adaptation technology needs assessment, which still requires further development, as evidence that countries still have a poor understanding of what adaptation technologies can encompass.

Furthermore, knowing the still persisting difficulties and weakness regarding climate scenarios information, scale and uncertainty, Colombia would like to encourage the integration of assessments, guidance and recommendations on no-regrets measures that generate multiple gains for adaptation, national development goals, and more broadly, the global environment.

In addition, Colombia recommends evaluating the definition of workshops and guidelines produced by the NWP to other developing countries aimed to address the new arrangements under the Cancun Agreement in reference to the NAPS and the process for other developing countries to employ the modalities formulated to support LDCs on the formulation and implementation of NAPs.

Given that adaptation is an inordinately complicated process which requires no less than full mainstreaming of climate change considerations into all levels of sectoral and territorial planning, and in-depth changes in behavior and productive practices, Colombia encourages the NWP to promote the participation of other Ministries and agencies such as planning, agriculture, energy among others in the formulation, development and implementation of adaptation projects as well as in the participation with lessons learned and experiences sharing.

## Paper no. 2: El Salvador on behalf of Belize, Guatemala and Honduras

Propuesta de El Salvador en nombre Belize, Guatemala y Honduras.  
Propuestas de nuevas actividades en el marco del Programa de Trabajo de Nairobi (PTN) sobre los impactos del cambio climático y la vulnerabilidad y adaptación

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1. El Salvador en nombre de Belize, Guatemala y Honduras, respondiendo a la invitación del Órgano Subsidiario de Asesoramiento Científico y Tecnológico (FCCC/SBSTA/2011/L.13), tiene el placer de presentar propuestas de ideas acerca del Programa de Trabajo de Nairobi sobre los efectos, la vulnerabilidad y la adaptación al cambio climático y de posibles nuevas actividades para consideración en el 35º período de sesiones de dicho Órgano.
2. El objetivo del programa bajo su mandato actual es ayudar en particular a los países en desarrollo a mejorar su comprensión y evaluación de los impactos, la vulnerabilidad y la adaptación. El futuro del programa debe ser orientado a fortalecer la aplicación plena, efectiva y sostenida de la Convención y para este fin el Programa requiere nuevos enfoques y cambios en las modalidades de manera que respondan a las urgentes necesidades de las Partes que son países en desarrollo. Un futuro programa de trabajo debe tener como objetivo mejorar el conocimiento dirigido a la implementación de acciones para reducir la vulnerabilidad y promover la adaptación de la población y sectores socioeconómicos al cambio y variabilidad climática sobre una sólida base científica, técnica y socioeconómica, teniendo en cuenta la variabilidad del clima y el cambio climático presentes y futuros. Así mismo, se deberá tomar en cuenta el conocimiento tradicional y ancestral local en la identificación, diseño, planificación e implementación de estas medidas.
3. Las estrategias y medidas de adaptación en países en desarrollo requieren apoyo urgente e inmediato de los países desarrollados para la formulación e implementación con el objetivo para prevenir, reducir o minimizar los efectos adversos del cambio climático, en especial en los países en desarrollo de baja altitud, insulares, con zonas costeras, zonas áridas y semiáridas, zonas expuestas a inundaciones, sequía y desertificación, y con ecosistemas montañosos frágiles al clima. El PTN debe evolucionar para asistir a las Partes a responder a los efectos, la vulnerabilidad y la adaptación al cambio climático, de acuerdo al trabajo que se realiza en el Marco de Adaptación (1/CP.16). La vulnerabilidad no es una decisión política—de acuerdo a la ciencia, la vulnerabilidad es función del carácter, magnitud y tasa de variación climática a que está expuesto un sistema, su sensibilidad y su capacidad de adaptación (IPCC 2001). Por tanto, América Central, como zona de alta vulnerabilidad, requiere actividades y modalidades orientadas a la planificación y ejecución de estrategias, políticas y medidas de adaptación. Estas deben ser definidas por los mismos países en desarrollo sobre la base de los procesos existentes y relevantes según el contexto nacional.
4. En el contexto del PTN con un objetivo reformado, los países que suscriben esta propuesta consideran la necesidad de abordar de forma prioritaria aspectos relacionados a temas de ordenamiento territorial, creación y fortalecimiento de la red de observación de sistemas hidrológicos y meteorológicos; Agricultura y seguridad alimentaria; Recursos hídricos y costero marinos; recursos forestales y biodiversidad, salud, desarrollo de capacidades en ciencia y tecnología, educación, capacitación y sensibilización del público.

5. Nuevas actividades del PTN requieren un enfoque temático con el objetivo de mejorar el conocimiento dirigido a la implementación de acciones para reducir la vulnerabilidad y promover la adaptación de la población y sectores socioeconómicos al cambio y variabilidad climática. Estas actividades deben ser llevadas a cabo por medio de modalidades conjuntas y que incluyan colaboración entre los diferentes entes de la Convención (Comité de Adaptación, Comité de Tecnología, Grupo Consultativo para Comunicaciones Nacionales etc.). El trabajo del PTN no puede limitarse únicamente a la utilización de métodos e instrumentos desarrollados hasta ahora bajo el PTN.
6. Adicionalmente, las modalidades para completar estas actividades pueden incluir talleres con enfoque de trabajo local, con instituciones involucradas en redes sistemáticas de prevención, entre otros, la organización de talleres internacionales cuando sea de importancia, la creación de fondos de becas para capacitación, el fomento de la capacidad, en particular mediante actividades de formación de instructores, entre otros.
7. El financiamiento para completar actividades bajo estas modalidades requieren del apoyo de países del Anexo I, según los compromisos bajo la Convención, de acuerdo al artículo 4.4. Por lo tanto, se deben apoyar con los costos incrementales derivados de la reducción de la vulnerabilidad como consecuencia de los impactos del cambio climático, así como el costo total de las acciones compensatorias para satisfacer los daños y pérdidas debido al cambio climático.
8. El abordar las temáticas prioritarias presentadas en el párrafo 4 *supra* requiere de, entre otras cosas, completar las actividades mencionadas bajo cada temática:
  - I. Ordenamiento territorial, creación y fortalecimiento de la red de observación de sistemas hidrológicos y meteorológicos:
    - i. Creación y fortalecimiento de centros de excelencia para la formación de capacidades y gestión del riesgo;
    - ii. Conformar un fondo de becas al nivel regional para la formación técnico-científica de profesionales de la región en temas relacionados a meteorología, climatología, hidrología y técnicas de pronóstico de eventos climáticos extremos y gestión del riesgo, y apoyar estudios especializados en universidades de la región;
    - iii. Integrar la planeación y el manejo de recursos coordinando con todos los niveles de gobierno para desarrollar programas de trabajo por regiones político administrativas y asegurar su viabilidad;
  - II. Agricultura y seguridad alimentaria:
    - i. Diseñar e implementar Sistemas de Alerta Temprana ante amenazas climáticas sobre, entre otros, sistemas productivos y riesgos para la seguridad alimentaria con información desagregada para generar alerta que considere las diferentes vulnerabilidades;
    - ii. Fortalecimiento de la investigación aplicada sobre las relaciones entre clima y agricultura, y su efecto diferenciado en hombres y mujeres, con énfasis en la evaluación de la vulnerabilidad actual y futura sobre cultivos alimenticios, la ganadería (incluyendo avicultura y otros animales domésticos), pesca y acuicultura, etc;
    - iii. Organizar cursos anuales de capacitación al personal técnico-científico de centros de investigación agropecuaria sobre metodologías y aplicación de éstas en la evaluación de la vulnerabilidad actual y futura al cambio climático para el diseño de medidas de adaptación;

- iv. Desarrollar metodologías y mecanismos que permitan coordinar la planificación agrícola con la hídrica de forma que permita informar la agricultura de las predicciones de precipitación y riego requerido;

### III. Salud:

- i. Capacitación enfocada a los servicios de salud por medio del desarrollo de paquetes de herramientas, orientación, información y capacitación para apoyar las campañas de sensibilización y promoción destinadas a proteger la salud del cambio climático a nivel nacional y regional;
- ii. Desarrollar actividades para promover la sensibilización y campañas de promoción para poner la salud en el contexto de los impactos del cambio climático y la adaptación del programa a nivel sub-nacional, nacional regional, e internacional.

### IV. Educación y Desarrollo capacidades:

- i. Conformar un fondo de becas al nivel regional relacionados a meteorología, climatología, hidrología y técnicas de pronóstico de eventos climáticos extremos y gestión del riesgo, y apoyar estudios especializados en universidades de la región para temas relacionados al cambio climático;
- ii. Gestionar recursos para poder trabajar con mujeres en organizaciones de base para que las mismas tengan información, conocimientos, experiencias, redes y recursos que son vitales para incrementar la resiliencia cuando se enfrentan a desastres;
- iii. Integrar la perspectiva de género en las políticas de desastres sobre gestión del riesgo, planes y procesos de toma de decisión incluyendo aquellos relacionados a la evaluación del riesgo, alerta temprana, manejo de la información, educación y capacitación;
- iv. Crear programas para que las comunidades desarrollen la capacidad de conservación y recuperación de los ecosistemas con los que conviven, incluyendo la adopción de tecnologías apropiadas para medios de vida sostenibles para la diversificación de sus fuentes de sustento, aprovechando al máximo los conocimientos tradicionales.

9. Los países de la región centroamericana que suscriben esta propuesta consideran también importante que nuevas actividades del PTN confiera un enfoque específico a grupos vulnerables, como las mujeres, comunidades indígenas, y comunidades locales. Por tanto, el PTN debe concebir la ciencia, la tecnología y la innovación en forma integral, reconociendo el potencial de las formas tradicionales, autóctonas e indígenas y a las poblaciones que las practican como interlocutores válidos en la generación de respuestas al cambio climático. Para esto, es necesario crear programas para que las comunidades desarrollen la capacidad de conservación y recuperación de los ecosistemas con los que conviven, incluyendo la adopción de tecnologías apropiadas para medios de vida sostenibles, para aprovechar al máximo los conocimientos tradicionales y la diversificación de sus fuentes de sustento.

10. La organización de un taller conjunto del OSACT y el OSE a llevarse a cabo en Diciembre 2011 debe proporcionar la información necesario para desarrollar modalidades que permitan al OSACT y OSE trabajar de forma conjunta y constante para fortalecer la aplicación plena, efectiva y sostenida de la Convención y para este fin el Programa requiere nuevos enfoques y cambios en las modalidades de manera que respondan a las urgentes necesidades de las Partes que son países en desarrollo.

## **Nairobi Work Program on impacts, vulnerability and adaptation to climate change (SBSTA)**

Pakistan's National Climate Change Policy is in the final stages of its formal approval by the Cabinet. It has been developed with a major focus on identifying the vulnerability of the poor and building their capacity through knowledge development and sharing of information on adaptation to climate change at the local level. A National Plan of Action on Adaptation and Mitigation has also been finalized through an extensive process of consultation with all stakeholders that include the Provincial Governments, Development Agencies, NGOs and the Private sector.

This Plan of Action involves practical interventions to prepare our marginalized groups for climate resilient development and to face the challenges posed by climate change. Pakistan is in the grip of these extreme events like changing pattern of Monsoon resulting in increased rainfall and floods on persistent basis. The 2010 experienced the Super Floods in major parts of the country; and this year's extreme rainfall in the Provinces of Punjab, Sindh and Balochistan has once again triggered floods affecting a sizeable population dependent on agriculture and subsistence livelihoods. Moreover, this phenomenon is further complicated by the rising incidents of Dengue Fever resulting from mosquitoes thriving on stagnant water caused by heavy rains.

The Government of Pakistan through the involvement of NGOs has shown its resolve to adapt to the challenges posed by changing climate. Various products in the form of documentaries, messages in the print and electronic media and brochures have been developed in laymen terms and local languages to send the message across to the affectees. Moreover, climate and seismic resilient construction of low cost houses with indigenous products/material has been initiated first on a pilot scale to test its durability and longevity and then replicated on a larger scale in the far flung areas impacted by the climate change. This has also resulted in building the capacity of local people in climate resilient reconstruction and rehabilitation.



## **SUBMISSION BY POLAND AND THE EUROPEAN COMMISSION ON BEHALF OF THE EUROPEAN UNION AND ITS MEMBER STATES**

**This submission is supported by Albania, Croatia, Iceland, the Former Yugoslav Republic of Macedonia, Montenegro and Serbia.**

Warsaw, 20<sup>th</sup> September 2011

**Subject: Nairobi Work Programme on impacts, vulnerability, and adaptation to climate change**

**Submission on further views and relevant information on progress made and gaps as well as views on new activities that may be needed to achieve the objective and expected outcomes of the Nairobi Work Programme**

### **Introduction and General Comments**

1. The SBSTA invited Parties and relevant organizations to submit to the secretariat, by 19 September 2011 their proposals for upcoming activities under the Nairobi work programme, taking into consideration the information included in the annex to FCCC/SBSTA/2011/L.13.
2. The EU notes that activities related to
  - enhancing the use of indigenous and traditional knowledge and practices,
  - the application of gender-sensitive approaches and tools,
  - improving the dissemination of information and knowledge products,
  - facilitating the development of, and access to, climate data and scenarios,
  - further developing targeted knowledge products, enhancing knowledge on the economic aspects of adaptation, and
  - building capacity,are cross-cutting in nature and should be linked to the actions considered to strengthen adaptation relating to: water, food security, ecosystems and infrastructure and human settlements.
3. The EU suggests that Parties adopt specific actions within the above scope for the coming 5 years at SBSTA 35.

### **Specific suggestions**

4. The EU supports that the upcoming activities should address those broad areas as identified in paragraph 1 (c) (i) Water (including drought, floods and glacial melt), (ii) Food security (including agriculture and subsistence livelihoods), (iii) Ecosystems (including mountain ecosystems and coastal and marine ecosystems) and (iv)

Infrastructure and human settlements of the Annex to document FCCC/SBSTA/2011/L.13. In addition the EU suggests to also consider the relevant findings of the IPCC, e.g. such as those included in the Synthesis Report of the AR4 related to impacts, vulnerability and adaptation issues of the broad areas identified during SBSTA 34.

5. Furthermore the EU would like to elaborate more on strengthening sector-specific and cross-sectoral activities related to the broad areas already identified which should be undertaken with a view to advancing sub-themes
  - b (ii), “Collecting, analysing and disseminating information on past and current practical adaptation actions and measures, including adaptation projects, short- and long-term adaptation strategies, and local and indigenous knowledge”, and
  - b (iv), “Facilitating communication and cooperation among and between Parties and relevant organizations, business, civil society and decision makers, and other stakeholders” as specified in the Annex to decision 2/CP.11.
6. The EU suggests considering the work already undertaken by bodies such as the IPCC, but also thematic, regional, and international organisations, for instance CCCCC, UNISDR, CGIAR centres or SIWI, in order to avoid duplication of effort in specifying in greater detail the new activities.
7. The EU proposes to consider these issues within the existing nine work areas of the NWP (Methods and tools, Data and observations, Climate modelling, scenarios and downscaling, Climate related risks and extreme events, Socio-economic information, Adaptation planning and practices, Research, Technologies for adaptation and Economic diversification).
8. The EU also suggests organizing technical workshops but is also suggesting other modes making better use of modern information technology and thus avoiding time consuming and expensive travel activities. Workshops might be organized by or in co-operation with other thematic, regional or international organizations as appropriate, under the guidance of the Chair of the SBSTA, as appropriate, with invitations to representatives from Parties, relevant organizations, representatives of indigenous people, groups of specific vulnerable people (e.g. women, children).
9. There should be not more than two workshops or other activities per year. The EU is flexible with respect to the exact timing of those activities as long as duplication of effort is avoided and most efficient use of resources can be achieved. In this context the EU encourages the co-operation of the secretariat with other relevant organizations in the various areas.
10. The EU also suggests requesting the secretariat to prepare a report on each of the activities, to be made available to Parties by the next session following the activities.

**Submission by the United States of America**

**Possible Areas of Further Work Under the Nairobi Work Programme**

**22 September 2011**

At its thirty-fourth session, the Subsidiary Body for Scientific and Technological Advice invited Parties and relevant organizations to submit to the Secretariat their proposals for upcoming activities under the Nairobi Work Programme (NWP). The United States welcomes the opportunity to submit, pursuant to paragraph 25 of FCCC/SBSTA/2011/2, its views on possible areas of further work under the NWP.

The NWP has made significant progress in achieving its objective of assisting Parties to improve their understanding and assessment of impacts, vulnerability, and adaptation to climate change, and to make informed decisions on practical adaptation actions and measures based on sound scientific, technical, and socioeconomic information. The NWP has been successful in attracting over 200 partner organizations, which represent non-governmental and intergovernmental organizations, national and regional institutions, UN agencies, academia, the research community, and the private sector.

Partners have made over 140 action pledges to advance adaptation by assessing risk and vulnerability, raising awareness of climate impacts and adaptation solutions, building capacity, delivering climate information and services to decision makers, facilitating the sharing of knowledge and good practices, and providing financial and technical support for adaptation planning and activities. For example, calls for action have enhanced regional cooperation and networks in Africa, Asia, the Caribbean, Latin America and the Pacific as NWP partners have worked to make climate information and tools more available, accessible, and applicable to decision makers facing region-specific challenges.

The NWP allows Parties to utilize and leverage these inputs from non-Party stakeholders by making information about projects, lessons learned, and good practices widely available, and by providing a forum for identifying cross-cutting challenges to implementing adaptation action and for collectively identifying solutions. Calls for action under the NWP help interested partners focus on priority scientific and technical needs, thereby facilitating the utilization of resources where they are most needed for supporting adaptation action. The United States sees value in looking into further ways to more fully take advantage of the knowledge, expertise, and innovation of partners through the NWP. For example, the NWP's Private Sector Initiative could expand efforts to utilize the innovative capacity and experience of the private sector to complement public sector efforts and explore options for public-private partnerships.

The NWP themes and work areas have been valuable in advancing understanding of adaptation and in providing information to support informed decision making. As a new agenda for the NWP is set, we see value in revisiting the work areas to expand into emerging priority areas. The NWP can

support the process to enable Least Developed Country Parties (LDCs) to prepare for and implement national adaptation plans by improving understanding of approaches to integrating adaptation into existing national and sectoral development policies and plans identifying tools and resources that would support the design of robust medium and long term adaptation planning under multiple climate scenarios. The NWP could also add a work area on communication to improve the dissemination of information gathered through NWP efforts to those making climate adaptation decisions to support more robust adaptation action. An additional area of interest for future work is in monitoring and evaluation of adaptation actions. As governments and communities work to prepare for and respond to climate impacts, it will be crucial to improve our ability to evaluate actions taking place to allow for efficient and effective use of resources and the sharing of best practices and lessons learned.

We also believe that it would be useful to take a sectoral approach to the work areas. This would have many advantages, most notably by helping the UNFCCC to engage and learn from thematic users what specific information and tools are most needed, at both the national and local scale, and which practical actions have proven to be successful. Looking at the work areas from the perspective of specific sectors would allow knowledge from previous NWP efforts to be more applicable for adaptation practitioners and decision makers by putting information in the context of the issues and challenges they are facing. Taking a sectoral approach in the NWP could also support national adaptation planning processes in LDCs. Priority sectors that should be considered include: water, agriculture and coasts. Our involvement in an assessment of needs under the Adaptation Partnership has shown that these thematic areas are routinely identified as critical.

Finally, while we understand the broad range of needs Parties have with regard to their adaptation activities, the United States remains committed to a NWP that undertakes its activities within the mandate of the Subsidiary Body for Scientific and Technical Advice. We support interaction between the NWP and the SBI and/or other bodies, including the Adaptation Committee, to support adaptation actions beyond the SBSTA mandate. In this regard, some of the activities in the annex will need to be reconsidered or reformulated.

**A submission to the UNFCCC Secretariat on possible areas of further work on impacts, vulnerability and adaptation to climate change under the Nairobi work programme**

**Subject: Climate-Smart Agriculture**

**Mandate: FCCC/SBSTA/2011/2, paragraphs 24 and 25**

The Food and Agriculture Organization of the United Nations (FAO) thanks SBSTA for the opportunity to make available to Parties its views in the context of possible areas of further work on impacts, vulnerability and adaptation to climate change, including proposals for upcoming activities, under the Nairobi work programme.

Agriculture<sup>5</sup> is among the productive activities, if not THE productive activity, most vulnerable to climatic changes, given that yields are directly affected by climate variability/change and the majority of the poor are dependent on agriculture for their livelihood. Agriculture's crucial role in food security, poverty reduction and in the economies of a large number of countries – including many developing countries and least developed countries in particular - makes it an issue of importance, meriting close attention under the Nairobi work programme .

FAO would like to propose climate smart agriculture, which aims to improve food security and adaptation to climate change, as well as to contribute to mitigate climate change, as a possible area of further work under the Nairobi work programme, which relates to several potential activities already identified in Annex 1 of document FCCC/SBSTA/2011/2, entitled “*Potential activities under the Nairobi work programme on impacts, vulnerability and adaptation to climate change*”. These activities include:

*“(c) Strengthening sector-specific and cross-sectoral activities to address impacts, vulnerability and adaptation issues relating to, inter alia: ...*

*(ii) Food security (including agriculture and subsistence livelihoods);...*

*(e) Further developing targeted knowledge products to engage stakeholders and decision makers, including, inter alia, lessons learned with respect to adaptation at different governance levels and in different sectors, based on knowledge generated under the Nairobi work programme, and syntheses of information generated under the Nairobi work programme into knowledge products targeted at users in specific sectors or other thematic areas;*

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<sup>5</sup> The FAO definition of agriculture is inclusive of forestry and fisheries.

*(f) Enhancing knowledge on the economic aspects of adaptation through, inter alia, pilot projects on applying different methods and tools for assessing the costs and benefits of adaptation (and the documentation and sharing of lessons learned from these projects), calls for action and further activities on reducing reliance on vulnerable economic sectors, including through economic diversification;”*

In developing countries, agricultural growth is urgently required to support the food security of growing populations. FAO has estimated that agriculture production needs to increase globally 70% to meet a projected population of more than 9 billion by 2050 and that the largest increase in demand will be in developing countries. However, the adverse impacts of climate change will increase the difficulty of obtaining needed agricultural growth.

Agriculture is perhaps the most climate sensitive sector, with output directly affected by even slight climatic variability, not to mention the more frequent and intense extreme climate events already being experienced. Slow onset changes in temperatures and precipitation are expected to affect seriously food and livelihood security, in the absence of adequate adaptation and mitigation efforts. It is usually the rural poor, who depend directly on agriculture for their livelihoods and food, who suffer disproportionately from climate change impacts. Increasing the resilience of agricultural and aquatic systems to climate change is thus imperative for their adaptation to climate change.

At the same time, agriculture accounts for around 12-14% of global greenhouse gas emissions. If land-use changes, including deforestation are considered (agriculture is a main driver of deforestation and draining of wetlands), its share becomes around 30%. 70% of the technical mitigation potential of agriculture is in developing countries and more than 75% of this potential could come from sequestering carbon in agricultural soils. Although low in absolute terms, rates of GHG emissions from agriculture in developing countries are growing due to increases in demand for agricultural produce, as well as the need of developing countries to meet their own food security and development goals.

Meeting increasing demand for food, fuel, fiber and carbon storage from agriculture, as populations, climate change impacts and emissions from agriculture increase, will ultimately require transformation of agricultural production systems. However there are knowledge gaps which limit transition. Enabling farmers to make more climate-smart choices requires improved knowledge of which agricultural practices would be most promising in this regard, within specific agro-ecological regions. It would also require a better understanding of the constraints and opportunities to farmer adoption of such practices.

“Climate Smart Agriculture” addresses the challenges of building synergies among climate change mitigation, adaptation and food security that are closely related within agriculture and minimizing their potential negative trade-offs. It seeks to enhance the capacity of the agricultural sector to sustainably support food security, incorporating the need for adaptation and the potential for mitigation into development strategies. There is no blueprint for climate smart agriculture and the specific contexts of countries and communities would need to shape how it is ultimately implemented. The specific conditions, circumstances, and capacities within countries will define opportunities and barriers to implementation, and hence policy choices. Countries are also not starting from zero and ongoing initiatives and activities can be used (e.g. conservation agriculture, sustainable land and forest management, ecosystem approaches to fisheries and aquaculture).

Some types of agricultural practices generate synergies between mitigation, adaptation and food security – such as conservation agriculture that increases soil carbon sequestration as well as water holding capacity that contributes to drought and flood resilience. In other cases there are tradeoffs: e.g. conversion of forested lands to agriculture use. Countries with a large share of their population engaged in agricultural production and high rates of food insecurity are often obliged to make urgent and difficult policy choices on their agricultural growth strategies based on insufficient evidence.

Transformation of agricultural production and food systems to meet increasing demand from an additional 3 million people in 2050, changing dietary habits and the continuing need for more sustainable use of natural resources provides an opportunity to also consider how climate change adaptation and mitigation might also be addressed through some of the same practices.

FAO is developing an array of knowledge tools (e.g. a Climate Smart Agriculture knowledge platform, weather-based tools) and a number of climate-smart agriculture pilot projects to support countries in building capacity, experience and leadership to make their agricultural production systems more climate smart within the context of nationally-owned planning instruments and processes (e.g. National Adaptation Plans).

Paper no. 7: United Nations Development Programme

**Subject           Inputs to Subsidiary Body for Scientific and Technological Advice (SBSTA) on matters relating to proposals for upcoming activities under the Nairobi Work Programme, taking into consideration the information included in the annex, as referred to in document FCCC/SBSTA/2011/L.13, paragraph 10 and Annex.**

The United Nations Development Programme (UNDP) thanks the SBSTA for the opportunity to comment on the direction of the important work of the Nairobi Work Programme on impacts, vulnerability and adaptation to climate change (NWP).

UNDP recognizes the value of the NWP and the importance of its focus on supporting all Parties, particularly developing countries, to improve their understanding and assessment of impacts, vulnerability and adaptation to climate change and to make informed decisions on practical adaptation actions and measures to respond to climate change. In the context of the Cancun Agreements and the initiation of a number of institutional arrangements around the issue of Adaptation, particularly the Adaptation Framework, the Adaptation Committee, and the introduction of National Adaptation Plans, the activities under the NWP continue to be essential in grounding discussions and decisions on impacts, vulnerability and adaptation on a sound scientific, technical and socio-economic basis.

With regards to the potential activities outlined in the Annex of document FCCC/SBSTA/2011/L.13, UNDP supports the suggestions as relevant to the needs identified by countries. The four key substantive areas highlighted in this list of potential activities are: indigenous knowledge and gender-sensitive approaches, sector-specific and cross-sectoral activities, climate data and scenarios, and economic aspects of adaptation.

In response to the first substantive focus area, UNDP has and will continue to support governments to prepare gender-responsive adaptation policies and programmes, through awareness raising, technical advice, and capacity building. Addressing the gender dimensions of climate change is seen as an integral part of all UNDP's activities that support the implementation of the NWP. As such, given the wealth of knowledge available within marginalized communities and individuals, we wish to further emphasize the importance of incorporating both indigenous knowledge and gender analysis into all activities of the NWP.

UNDP would also emphasize the need for more information on cross-sectoral and multi-sectoral activities, given the cross-cutting nature of climate change and the need to coordinate across sectoral areas. To support this aim, the activities the NWP will pursue on both sector-specific and



cross-sectoral issues should incorporate information and approaches that are accessible to all experts and practitioners, regardless of their sectoral focus. For more comprehensive climate change adaptation strategies, there is need to increase generation of gender-specific data in sector-specific activities, for key sectors such as water, agriculture and food security. Further, UNDP recommends to strengthen the NWP's focus on the links between climate change adaptation and development, particularly bringing in other relevant cross-cutting issues including poverty eradication and the Millennium Development Goals (MDGs). The NWP offers an opportunity to engage the Parties and the broader adaptation community to identify, analyse, and measure the increasingly important relationship between adaptation and development, and bring out the socio-economic and cultural components of climate change impacts, vulnerability and adaptation. The NWP efforts could include identifying key indicators and monitoring and evaluation guidelines for adaptation interventions with regards to development priorities (including MDGs).

The mechanisms used to carry out these substantive activities, i.e., approaches, methods and tools, good practice and knowledge products, and training of trainers, are all appropriate and relevant under the NWP mandate. With this in mind, and based on UNDP's experience working in developing countries, we wish to highlight the need to focus all information, methods and tools, and particularly knowledge products, on the practical needs and realistic contexts of countries. This can be supported through active identification and assessment of country demands around knowledge and information.

In addition, UNDP supports the use of existing knowledge platforms and is prepared to engage through the work of the Adaptation Learning Mechanism (ALM)<sup>6</sup>. Given its long-standing role in facilitating online knowledge sharing and learning on adaptation, and a wealth of adaptation resources accumulated over the past 4-5 years, the ALM represents a great opportunity for the NWP to dovetail its planned expansion of online presence and activities.

Finally, UNDP supports the need to identify and optimize synergies between the NWP and the agreed Cancun Adaptation Framework, Adaptation Committee and National Adaptation Plans. Given the components of the Cancun Adaptation Framework, there are several opportunities for NWP to engage and provide a mechanism for organizing work -- particularly around assessments, research, data, information and knowledge systems, education and public awareness. In addition, there is an opportunity for the NWP to support the entire scope of areas under the Adaptation Framework, by providing both substantive technical support, as well as facilitating knowledge dissemination and sharing of good practices, for the other areas of the framework as well. As such, UNDP would suggest further aligning the activities of the NWP to the areas of the Adaptation Framework and explore opportunities to support the evolving Adaptation Committee.

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<sup>6</sup> <http://www.adaptationlearning.net>

UNDP strongly supports the importance and added value of the continued efforts of the NWP and its engagement of relevant organizations, vulnerable communities, and groups, particularly those from developing countries, including the LDCs and Small Island Developing States (SIDS). Through UNDP's extensive experience, knowledge, and expertise, it stands ready to support the activities of the NWP and support its alignment with the emerging Adaptation architecture under the Cancun Agreements.

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