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International Conference on Climate Change Impacts and Adaption for Food and Environmental Security

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CONFERENCE BACKGROUND: Climate change and climate variability are among the top issues facing the world today. They pose real threats to the environment and to human systems specifically agricultural production, biodiversity and health, among others. Extreme climatic events such as typhoons are becoming more frequent and destructive, prolonged wet and dry seasons, and increased incidences of disease and pest outbreaks negatively affect agricultural production systems, leading to food and livelihood shortages — consequently threatening food and environmental security. Growing evidence of climate change around the world and in particular Southeast Asia, compels all sectors to act to ensure sustainability of lifelines that include: natural systems and food resources, rural livelihoods and human resources. The Southeast Asian region is challenged to increase its capacities and expertise to attain the set objectives of the Millennium Development Goals (MDGs), specifically those that pertain to eradicating extreme poverty and hunger and ensuring environmental sustainability. However, much of the research on climate change is conducted in a fragmentary fashion in different countries by discipline and sector. This situation presents opportunities for developing multidisciplinary and multisectoral approaches. It is in this regard that the International Conference on Climate Change Impacts and Adaptation for Food and Environmental Security (ICCCIAFES) was proposed to provide a venue for promoting integrative partnerships toward convergence of ideas for holistic solutions to reduce the impacts of climate change on the region's food, environmental, nutritional and health security.

Objectives

ICCCIAFES' main goal was to bring together researchers, academicians, policy makers and planners, development workers and other professionals in the region in a discussion forum to exchange information and forge linkages towards enhanced capacity to achieve food, environmental, nutritional and health security in the face of climate change.

Specifically, the conference aimed to:

1. Exchange state-of-the-art knowledge on climate change science, adaptation strategies, disaster risk reduction, planning and management, and vulnerability and impact assessment tools among regional stakeholders specifically in the agriculture and environment sectors;
2. Gather scientific information and experiences into an integrative body of knowledge in order to identify knowledge gaps and common, urgent and emerging issues related to food and environmental security in the region;
3. Identify location-specific knowledge and adaptation strategies that may be upscaled to other regions; and
4. Promote partnerships and linkages among different sectors for collaborative activities on climate change adaptation.

Conference Coverage

Call for Abstracts

The conference invited submission of abstracts on the following themes:

- Effects and impacts of climate change on food and environmental security issues, including state-of-the-art knowledge and assessment tools such as vulnerability assessment, risk characterisation, risk analysis, and impact assessment;
- Institutional (policy, governance, culture) and economic aspects of climate change science and adaptation;
- Country and regional collaborative experiences for climate change adaptation and disaster risk reduction; and
- Other climate change-related topics relevant to the conference theme.

Knowledge Partners

ICCCIAFES was held on 21–22 November 2012 at the Southeast Asian Regional Center for Graduate Study and Research in Agriculture (SEARCA) in Los Baños, Laguna, Philippines. Around 150 researchers, academicians, policy makers, and development workers representing 21 countries participated.

The conference was jointly organised by SEARCA and the University of the

Figure 1. Participants of the conference.

Philippines Los Baños (UPLB) through its Interdisciplinary Program on Climate Change (IdPCC), with the Asia-Pacific Adaptation Network (APAN), supported by the Institute for Global Environmental Strategies (IGES) in Japan, as the major sponsor. Additional partners included the Asia-Pacific Network for Global Change Research (APN); Food Security Center (FSC) at the University of Hohenheim (UHOH), Germany, and the German Academic Exchange Service (DAAD); Economy and Environment Program for Southeast Asia (EEPSEA); United Nations World Food Programme (UNWFP); and the Philippine Climate Change Commission (PCCC) as supported by the German Agency for International Cooperation (GIZ).

Likewise, the conference benefitted from the contribution of knowledge partners which included the Nanyang Technological University Rajaratnam School of International Studies– Centre for Non-Traditional Security Studies (NTU RSISCNTS); International Crops Research Institute for the Semi-Arid Tropics (ICRISAT); University of Tokyo, GIZ Biodiversity and Climate Change Project; and Philippine Climate Change Adaptation Project (PhilCCAP).

Serving as a platform for exchange on the latest knowledge on climate change impacts and adaptation linked to food security and environmental sustainability, the scientific meeting had three plenary sessions and four parallel sessions where 44 papers were presented based on the following themes:

- Status, Prospects, and Practices on Climate Change Adaptation in Agriculture;
- Climate Change Impacts and Vulnerability;
- Climate Change Adaptation and Agriculture;
- Institutional and Economic Aspects of Climate Change Impacts and Adaptation;
- Systems and Tools for Analysing Climate Change Impacts and Vulnerability;
- Regional and South-South Collaboration in Research and Development; and
- Networking for R&D and Capacity Building on Climate Change and Food and Environmental Security.

> It is not climate change per se that should concern us but its short- and long-term impacts on food security.
>
> *—Prof. Paul Teng, Dean, Graduate Studies and Professional Leaning, National Institute of Education, and Senior Fellow on Food Security, S. Rajaratnam School of International Studies, Nanyang Technological University, Singapore*

The papers presented a wide range of new knowledge along with appropriate indigenous or local technologies that can be used to address the impacts of climate change — not only as adaptation strategies — but also for mitigation and increasing resilience. The initiatives described vary widely in methods and approaches: simulation/modelling by experts to highly participatory approaches with direct involvement of end users in the field; differences in ecological zones (tropical forests, agroforestry systems, irrigated lowlands, dryland farms, fish pens in lakes, to pelagic fisheries); and scale (from breeding work/genetic level to household, community up to regional in scope).

The aim was for lessons to be learned, good practices to be adopted or adapted and upscaled, and for new collaborative initiatives to be undertaken so that environmental and food security shall be ensured for the majority of Southeast Asia and other regions that are bearing the brunt of adverse impacts of climate change.

Conclusion and Recommendations

The following are the key ideas, findings and lessons from the papers presented in all the plenary and parallel sessions:

1. Climate change is here and now. Rise in temperature, increased climate variability, extreme weather events, etc., clearly pose grave threats to food production, the environment, including lives and property.
2. A wide variety of tools are available to determine the effects of climate change. These tools range from sophisticated simulations and modelling by technical experts (e.g., GIS, SDSM, PRECIS, DSSAT, CORDEX, etc.) to highly participatory approaches involving end users in the local communities (e.g., PRA, documentation of local or indigenous knowledge and practices).
3. Such tools are helpful in pointing to measures needed to mitigate the risks or adapt/improve resilience to the effects or impacts of climate change. These measures need to be implemented in an integrated fashion to be effective, which include a combination of the following factors: change in people's attitudes; adoption/adaptation of new practices; physical infrastructure investments; and enacting policies to provide enabling environment and ensure sustainability of efforts.
4. A rich collection of knowledge systems and technological options are available to support CCA and DRR efforts. However, there is also a need to document, validate, and package local knowledge and practices, including socioeconomic and cultural aspects, for promotion and upscaling as appropriate, along with the science-based technologies.
5. Due attention should be given to most vulnerable or degraded (agro) ecosystems; most vulnerable or marginalised populations groups (women, children, indigenous peoples); and even to neglected but ecologically and nutritionally important crops.
6. It is important to counterpart with the local communities and engage them in participatory processes — from needs analysis, implementation, up to monitoring and evaluation. This gives local people a sense of ownership for project initiatives as well as helps ensure sustainable and long-term changes.

To sufficiently meet the huge challenges in ensuring food/nutritional security and environmental sustainability, the following are additional recommendations:

1. Continue strengthening collaborations in R&D, education, and community development efforts across public and private agencies — covering local, national, regional, and global scales.
2. Mainstream science and technology including good local practices in local and national governance systems as this will help ensure sustainability.
3. Strengthen extension programmes and knowledge transfer of research institutions including exchange between and among agencies working on climate change. This can be done through existing extension systems and networks; collaborative projects and activities; various fora such as training workshops and conferences; including online resources such as SEARCA's KC3.

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PROJECT TITLE

International Conference on Climate Change Impacts and Adaption for Food and Environmental Security, 21–22 November 2012, Los Baños, Laguna, Philippines

COUNTRIES INVOLVED

Southeast Asian countries

DURATION

1 year

APN FUNDING

US$ 10,000

PROJECT LEADER

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