



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

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**PROJECT TITLE: International Conference  
on Climate Change Impacts and Adaptation  
for Food and Environmental Security**

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## OVERVIEW OF PROJECT WORK AND OUTCOMES

### Keywords

Climate change, impacts, adaptation, food security, environmental security

### Objectives

The goal of the International Conference was to bring together researchers, academicians, policy makers and planners, development workers, and other professionals 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.

### Amount received and number years supported

The Grant awarded to this project was: US\$ 10,000

### Activity undertaken

International Conference on Climate Change Impacts and Adaptation for Food and Environmental Security, 21 - 22 November 2012, SEARCA, College, Los Baños, Laguna, Philippines

### Results

Attended by about 150 researchers, academicians, policymakers, and development workers representing 21 countries, the conference served 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 on seven themes where a total of 44 papers were presented.

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 likewise 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, fishpens in lakes, to pelagic fisheries); and scale (breeding work/genetic level to household, community, up to regional in scope).

### Relevance to the APN Goals, Science Agenda and to Policy Processes

The International Conference provided an avenue for knowledge sharing and dissemination of research findings specifically on climate change impacts and adaptation. Along APN's goals, it fostered regional cooperation in global change research issues relevant to the Asian and Pacific region; strengthened interaction between scientists and policymakers and provided scientific input to policy decision-making; and brought together various networks and organizations working on climate change impacts and adaptation for food and environmental security.

The various Conference presentations created awareness on research findings, policies, and practices on the Conference theme in various regions and Asia-Pacific countries and pointed directions for further capacity development and research in the area.

### Self-evaluation

The International Conference was successful based on the positive feedback received from participants during and after the conference. See p. 67 of the Conference Summary Report on the conference evaluation states,

“Participants considered the conference as highly beneficial, relevant, and timely – that it provided a good venue for experts, academicians, and practitioners to learn and share ideas, new knowledge,

and good practices on climate change impacts adaptation and mitigation. ICCIAFES according to them likewise presented opportunities for networking, exploring linkages and collaboration with other institutions, and providing valuable information on funding opportunities and other resources. In terms of general assessment and overall satisfaction, 66 percent rated the conference to be **excellent**, and about a third of them rated it as **good**.”

### **Potential for further work**

The conference provided avenues for further work:

1. Continued strengthening of collaborations in R&D, education, and community development efforts across public and private agencies – covering local, national, regional, and global scales;
2. Mainstreaming of science and technology including good local practices in local and national governance systems as this will help ensure sustainability; and
3. Strengthening of extension programs 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 trainings, workshops, and conferences; including online resources such as SEARCA’s KC3.

One of the more immediate post-conference initiatives is the harvesting of selected articles from among the presentations. These will be published in a special edition of two journals, one a Philippine-based and the other regional in scope. These are the *Journal of Environmental Science and Management (JESAM)* of UPLB-SESAM, and the *Asian Journal of Agriculture and Development (AJAD)* published by SEARCA. The conference is also a resource-rich pool from which to recruit reviewers or referees and editors. Working together on the said issues of the two journals is also a form of collaborating and fostering stronger linkages among the participants and the institutions they represent.

### **Publication**

International Conference on Climate Change Impacts and Adaptation for Food and Environmental Security Conference Summary Report. 2013. Philippines: SEARCA and UPLB

### **Acknowledgments**

Conference Convenors

- Southeast Asian Regional Center for Graduate Study and Research in Agriculture (SEARCA)
- Interdisciplinary Program on Climate Change (IdPCC), University of the Philippines Los Baños (UPLB)

Sponsors

- Asia-Pacific Adaptation Network (APAN), Institute for Global Environmental Strategies (IGES) with:
  - Asian Development Bank (ADB)
  - Ministry of Environment, Japan
  - Regional Resource Centre for Asia and the Pacific (RRC-AP) at Asian Institute of Technology (AIT) in collaboration with UNEP
  - United Nations Environment Program (UNEP)
- Food Security Center, University of Hohenheim (UHOH FSC) and German Academic Exchange Service (DAAD)
- Asia-Pacific Network for Global Change Research (APN)
- Economy and Environment Program for Southeast Asia (EEPSEA)
- German Agency for International Cooperation (GIZ) and Climate Change Commission (CCC) under the Office of the President, Philippines
- United Nations World Food Program (UN WFP)

## TECHNICAL REPORT

### Preface

Ideas, analyses, and measures that were discussed in the two-day event are like seeds that everyone needs to protect and in turn plant and nurture as seeds of change. The Conference provided a platform for knowledge sharing and exchange towards keeping research, policies, and academic and action programs responsive to the issues and challenges posed by the threat of climate change. Given its diverse range of participants who are leaders in their own fields, the Conference provided a medium for nurturing and cross-fertilizing these seeds of change towards strategically investing in initiatives that can generate the most synergistic results.

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### 1.0 Introduction

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 (IPCC, 2007). Extreme climatic events such as typhoons that are becoming more frequent and destructive, prolonged wet and dry seasons, and increased incidence 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 Southeast Asia in particular 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 therefore 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 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 conference aims 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.

The goal of the International Conference was to bring together researchers, academicians, policy makers and planners, development workers, and other professionals 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, it 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.

## **2.0 Methodology**

An International Conference on Climate Change Impacts and Adaptation for Food and Environmental Security was held on 21 - 22 November 2012 at SEARCA Headquarters, Los Baños, Laguna, Philippines. This scientific meeting included a one-day field trip within the Southern Tagalog Region on 23 November 2012.

The scientific sessions took place at the SEARCA Main Building inside the University of the Philippines Los Baños Campus.

The conference aimed to attract about 150-200 researchers, academicians, policy makers and planners, development workers, and other professionals from different international, government, non-government and academic organizations and invited submission of abstracts on the following themes:

- Effects and impact of climate change on food and environmental security issues, including state-of-the art knowledge and assessment tools such as vulnerability assessment, risk characterization, 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
- Other climate change-related topics relevant to the conference theme

Conference organizers included the Southeast Asian Regional Center for Graduate Study and Research in Agriculture (SEARCA) and the University of the Philippines Los Baños (UPLB), with support from the Asia-Pacific Adaptation Network (APAN) through the Institute for Global Environmental Strategies (IGES) in Japan; the Food Security Center (FSC) of the University of Hohenheim (UHOH) and German Academic Exchange Service (DAAD), and the Climate Change Commission (CCC) under the Office of the President of the Philippines.

The conference benefitted from the contribution of knowledge partners, namely: 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).



### 3.0 Results & Discussion

About 150 researchers, academicians, policymakers, and development workers representing 21 countries attended the **International Conference on Climate Change Impacts and Adaptation for Food and Environmental Security (ICCCIAFES)** 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.

The conference was jointly organized by SEARCA and the University of the 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 major sponsor. Additional partners/contributors included the Food Security Center (FSC) at the University of Hohenheim (UHOH), Germany and the German Academic Exchange Service (DAAD); Asia-Pacific Network for Global Change Research (APN); 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).

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 on the following themes where a total of 44 papers were presented:

- 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
- Networking for R&D and Capacity Building on Climate Change and Food and Environmental Security

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 likewise 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, fishpens in lakes, to pelagic fisheries); and scale (breeding work/genetic level to household, community, up to regional in scope).

The aim is for lessons to be learned, good practices to be adopted or adapted and upscaled, and for new collaborative initiatives to be undertaken—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.

### 4.0 Conclusions

Highlighted below were the key ideas, findings, and lessons from the conference:

- 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.
- 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).

- Such tools are likewise 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.
- 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 socio-economic and cultural aspects) for promotion and upscaling as appropriate, along with the science-based technologies.
- Due attention should be given to most vulnerable or degraded (agro) ecosystems; most vulnerable or marginalized populations groups (women, children, indigenous peoples); and even to neglected but ecologically and nutritionally important crops.
- 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 additional recommendations were enumerated:

- Continue strengthening collaborations in R&D, education, and community development efforts across public and private agencies – covering local, national, regional, and global scales;
- Mainstreaming science and technology including good local practices in local and national governance systems as this will help ensure sustainability; and
- Strengthening extension programs 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 trainings, workshops, and conferences; including online resources such as SEARCA's KC3.

## **5.0 Future Directions**

Selected articles from among the presentations will be harvested and published in a special edition of two journals, one a Philippine-based and the other regional in scope. These are the *Journal of Environmental Science and Management (JESAM)* of UPLB-SESAM, and the *Asian Journal of Agriculture and Development (AJAD)* published by SEARCA. The conference was also a resource-rich pool from which to recruit reviewers or referees and editors.

## Appendix

Please see separate file of Conference Summary Report publication, printing of which was funded by APN.

Organizers and Partners	Contributions (USD)
<p><b>Southeast Asian Regional Center for Graduate Study and Research in Agriculture (SEARCA)</b> SEARCA, College, Los Baños Laguna 4031 Philippines Tel.: (+63 49) 536 2361; 536 2363; 536 2365 to 67; 536 2290 Fax: (+63 49) 536 7097; 536 2283 Email: post@agri.searca.org Website: www.searca.org; www.climatechange.searca.org</p>	6,341.00
<p><b>University of the Philippines Los Baños (UPLB) Interdisciplinary Program on Climate Change (IdPCC)</b> College, Los Baños Laguna 4031 Philippines Tel.: (+63 49) 536 2251; 536 2836 Fax: (+63 49) 536 2251 Email: voespaldon@yahoo.com; fplansigan@yahoo.com climatechange.uplb@gmail.com Website: www.uplb.edu.ph</p>	~2,500.00 (in kind)
<p><b>Asia Pacific Adaptation Network (APAN) Institute for Global Environmental Strategies (IGES), Bangkok</b> Regional Center, 604 SG Tower 6F, 161/1 SoiMahadlekLuang 3. Rajdamri Road, Patumwan, Bangkok, 10330, Thailand Tel: +66(0)2-651-8797 ext. 16 Fax: +66(0)2-651-8798 URL: <a href="http://www.asiapacificadapt.net">www.asiapacificadapt.net</a> <a href="http://www.iges.or.jp">www.iges.or.jp</a></p>	28,410.92

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1,731.18

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553.00

**Total Partners' Counterpart to APN's Contribution  
of USD10,000.00**

**52,908.58 + ~3,000 in kind**