



AIACC

Building Scientific Capacity.

**1st AIACC Asia-Pacific Region
Open Meeting and Workshop
24-27 March 2003**

Workshop Report

The Asia-Pacific Region Open Meeting and Workshop of the project Assessments of Impacts and Adaptations to Climate Change (AIACC) were hosted by the START Southeast Asia Regional Center on 24-27 March 2003 at Chulalongkorn University in Bangkok, Thailand. The meetings were attended by investigators from AIACC regional studies in Asia and Oceania and other guests from the region and farther a field. The guests included persons with interests in climate change science and policy from government agencies, non-governmental organizations, and national focal points of the Global Environment Facility and UN Framework Convention on Climate Change (UNFCCC). Among these were many of the participants from another START workshop that was held in Bangkok to begin planning for Integrated Regional Studies of Monsoon Asia.

The first day was an Open Meeting that provided an opportunity for guests to learn about the AIACC project and the ongoing AIACC regional studies in Asia and Oceania. Guests and AIACC investigators engaged in discussions of how AIACC activities can contribute to and benefit from other regional research, capacity building, and assessment activities, including preparation of National Communications under the UNFCCC.

The meeting was opened by Dr. Anond Snidvongs, Director of the START Southeast Asia Regional Center. Dr. Neil Leary, Science Director of AIACC, provided a broad overview of the AIACC project. Mr. Chartree Chueyprasit, Deputy Permanent Secretary of the Ministry of Natural Resources and Environment of Thailand, welcomed the participants and shared some comments on vulnerabilities to climate change in Thailand and activities within the country to better understand the vulnerabilities and explore possible responses. Following this were presentations by Dr. Lin Erda on climate change impacts and adaptation in China, Mr. Graham Sem on the new guidelines for UNFCCC National Communications, and Mr. Ravi Sharma on UNEP climate change adaptation projects in Asia. These talks set the stage for presentations from each of the 6 AIACC regional studies in Asia and Oceania as well as panel discussions on information and capacity needs related to vulnerabilities and of adaptation opportunities, barriers and strategies.

The Open Meeting was followed by the three day Workshop for a more in-depth look at the AIACC regional studies. During the workshop, AIACC investigators presented the fruits of their first year's research, discussed the problems they have encountered, and considered strategies for overcoming some of the encountered problems. The workshop was structured in a number of parallel sessions:

- A. Data, trends and scenarios
- B. Climate sensitivities and impacts
- C. Vulnerability and adaptive capacity
- D. Adaptation strategies and evaluation
- E. Policy, synthesis and AIACC future

In sessions A through D, investigators from the AIACC regional studies gave presentations on their research progress to date in relation to each session topic. The sessions also allowed for lengthy discussion of research methods, problems encountered and potential solutions to these problems. In Session E on the last day, participants discussed topics that were introduced on the first day in “Carousels” (rotating brainstorming exercises) and developed recommendations. The topics of Session E and the Carousels included integrating AIACC with policy planning and national communications, synthesizing the work of the 24 AIACC regional studies around the world, and building upon the work begun by AIACC to further enhance scientific capacity and knowledge.

Rapporteur reports from the Open Meeting and the sessions of the Workshop follow. Most of the presentations made at the Open Meeting and Workshop are posted on the AIACC website (www.aiaccproject.org/meetings/meetings.html)

Rapporteur Reports

AIACC Asia-Pacific Region Open Meeting 24 March 2003 Bangkok, Thailand

Note: most of the presentations made in the Open Meeting by invited speakers, panel members and AIACC project teams are available on the AIACC website (www.aiaccproject.org/meetings/meetings.html). Rapporteur notes from the Open Meeting are available only for the two panel discussions.

Panel 1: Key Vulnerabilities, Information Needs and Capacity Needs

Chair: Anand Patwardhan, Indian Institute of Technology-Bombay

Rapporteur: Mr Luong Quang Huy, Centre for Environment, Research Education and Development, Indochina Global Change Network.

Panelists:

- T.K. Fernando, Director of GEF Enabling Activity in Sri Lanka
- Ms. Ma. Gerarda Asuncion D. Merilo, Senior Environmental Management Specialist, Interagency Committee on Climate Change Secretariat, Department of Environment and Natural Resources, Philippines
- Ms. Ngo Cam Thanh, Centre for Environment, Research Education and Development, Indochina Global Change Network
- Suruchi Bhadwal, Centre for Global Environment Research, TERI, India

Ms Ngo Cam Thanh, Vietnam

In the case of Vietnam, we have been doing many projects on this issues and can say that firmly that Vietnam would be one of the most vulnerable countries, not only the region but also in the world. We have identified that annual disaster that we face, mostly in the central and southern coast and mountainous areas nationwide are amplified seriously by the climate change and climate variability. And it is apparent that the impacts of climate change and variability are real and increasing, both in frequency and magnitude. The impacts we are facing are even more amplified by the transition in economy in my country, which others neighboring country might not have.

There are number of effects we consider as urgent issues:

- The impacts of climate change in the coastal zone and mountainous area
- The impacts of both climate change and economic renovation on the social lives, trends and the way which society cope with climate and weather extremes.

Have been developing a network of scientist, research institution and local authority to get the needed information and data for our research on the changes in the level of vulnerability. However, this network is not very firmly set as there are many difficulties in funding and the consistency in data and information.

Moreover, as I pointed out earlier and as the issues are regional at least, we not only need data and information in our country but also data and information from other neighboring countries, at least 2 countries. An example is Mekong delta. The need for information is mostly on the changes in global and regional climate variability, forecasting, modeling, etc so that we can use or at least associate the data to our studies.

Scientific and technical capacity needs include:

- More impacts studies to be undertaken to quantify social and economic consequences and the processes that link climate effects to sectoral impacts.
- The collection and archiving, in readily-accessible format, of relevant biophysical and socio-economic data, for example, crop production, health, storm damage, and losses and emergency assistance, is essential to monitor quantitatively impacts and develop appropriate policies and strategies for mitigation.
- More training opportunities in climate assessment be increased, covering both biophysical and socio-economic aspects to support expanded climate change and vulnerability studies.
- More attention should be paid to how El Nino and La Nina characteristics (refrequency, magnitude, regional effects) are related to natural climate trends and, in the long term, to the effects of climate change induced by human activities. Additional research and expertise on this issue is needed not only within the region but also world-wide.
- Training workshops, courses and fellowships to be organized to assist the research community of Southeast Asia to take advance of the latest techniques and analyses available internationally for the identification of climate effects and sectoral impacts and that, through this process, the scientist of the region share their own experience and expertise with other nations.
- Scientists involved to the project on climate change, vulnerability, adaptation should actively engage with the policy making in order to disseminate appropriate information and promote awareness of the need for an effective response.
- Scientific community should have a clear responsibility to convey information and findings within each country and in regional for a to all stakeholders (politicians, government agencies, end users in different sectors, etc)
- It is necessary to emphasise that not all the impacts of climate change and variability are negative and that an effective response strategy should contain elements directed towards taking full advantage of potentially beneficial effects as well as mitigating adverse consequences.

Dr. T.K. Fernando, Sri Lanka

A number of economic sectors have been identified as vulnerable and affected seriously by climate change in Sri Lanka:

- Agriculture: highly vulnerable, dependent on water resources.
- Human health related to climate change, disease such as malaria was concerned.
- Studies in the coastal zone, sea level rise, coastal erosion, result shows high level of vulnerability to the impacts of climate change, concerning economic factors and losses.
- Studies on water resources considered factors related to decrease of rainfall in most parts of the country.
- Land loss and inundation: consider the magnitude of sea level rise and the area of land loss, concerning economic factors as well.

Several constraints were faced during the preparation of the Initial National Communication. One of the major constraints was the limited availability of country specific studies and relevant research. For example, in the preparation of the GHG inventory, reliable data were not available. There were also gaps in activity data. In addition, there were no country specific emission factors to be used and default values were taken from IPCC guidelines. Hence capacity building for developing countries factors is needed. Likewise, very few studies had

been undertaken on vulnerability and adaptation assessments. This is probably due to the lack of sufficient assessments. Therefore capacity building in these areas is also essential.

Likewise, very few studies had been undertaken on **vulnerability and adaptation assessments**. This is probably due to the lack of sufficient assessments. Therefore capacity building in these areas is also essential.

Sri Lanka also lacks national specific studies on climate change and related issues. Support for conducting research under the Climate Change Enabling Facility (Phase II) Project has now been provided by the Global Environment Facility (GEF). This project, which has two major research components, namely, the Senior Research Programme and Junior Research Programme, is now in progress. Under the Senior Research Programme which was started in October 2002, 20 research studies are being done on selected priority areas under vulnerability, adaptation and mitigation. These studies are being conducted by senior, experienced researchers.

Under the Junior Research Programme young researchers have been encouraged to carry out studies on climate change and related issues under the supervision of senior, experienced researchers. 47 research proposals, submitted by these young researchers, have been selected for funding. These young researchers are university graduates with a minimum of bachelor degree. This research programme are commenced recently. Both research programme are progressing well. These studies, once completed, will enhance the existing database of country specific on climate change and related issues.

The following are some of the information needs that exists at present:

- Non-availability of regional scenarios
- Results of climate change related studies done by other countries (regional concern)
- Non-availability of methodologies for vulnerabilities and adaptation assessments.

It is suggested that some mechanism be worked out on a regional basis for the purpose of exchange of information and for coordination of other activities related to climate change.

Ms. Ma. Gerarda Asuncion D. Merilo, Philippines

Information map for Vulnerability has been developed with different zones for the Philippines. Climatic factors such as precipitation, rainfall, temperature, etc and phenomenon such as El Nino, La Nina, and others have serious effects on the society, impacts in the form of typhoon, drought, etc. Vulnerability assessments have been done in different vulnerable sectors such as agriculture, water resources and coastal resources

Information and capacity needs for addressing climate change adaptation include:

- Risk assessment with climate change, in relation to extremes and variability
- Adaptive capacity of communities and countries to deal with climate risks.
- Assessment on human dimension about water needs, risk assessment, settlements health, food, etc
- Development of strategic adaptation framework and policy interventions considering social, economic, etc factors
- Issues on understanding climate extremes, social economic condition and vulnerability, stakeholder engagement.
- Strengthen capacity of stakeholder to further assess vulnerability and adaptation to the impact of climate change, etc

Suruchi Bhadwal, India

Multiple stresses act on the natural and human systems. Climate change is considered as an additional stress factor on these systems and gives rise to a number of risks.

Vulnerability is higher in developing countries for a number of reasons. Population growth, increased reliance on climate sensitive sectors, agriculture and forestry are considered as most vulnerable along with other economic sectors. In India, agriculture accounts for 27% of GDP and feeds 700 million people. 60% of cultivation is rain-fed and consequently vulnerable to climate variation and change.

Information and capacity building needs include:

- Fortify current coping capacity (to current adverse situation like droughts and floods)
- Integrate adaptation in planning (crop insurance, seed banks, etc.)
- Research and Development and awareness creation (tolerant species, etc)
- Technological and financial resources
- At local scale need increase awareness of climatic risks and climate change
- Diversification of income sources
- At the national scale, need policies targeted at vulnerable sectors with emphasis on poverty reduction
- At global Scale: International cooperation, science, know-how, finance
- Removal of barriers to international trade

A variety of activities are underway that can address some of the needs:

- Website on climate change set up by the MoEnvironment and Forestry
- Education and Research activities initiated by MoAgriculture
- Several studies undertaken
- Preparation of INC, V&A component
- UK cooperated study focusing on adaptation.

OPEN DISCUSSION

The Chair, Anand Patwardhan addressed the importance of human dimension in vulnerability assessment. Capacity building: more capacity building activities for both individuals and institutions, covering natural and human systems as they are not isolated, there is a complex system we are talking about. That would be helpful to have a comprehensive overview.

* Rodel Lasco: do you think there is a different, gaps between countries

* Pointing out some economic sectors which are vulnerable to phenomenon such as SLR, how the government deals with this, which contexts that adaptation can be achieved. Coastal zone was pointed out as an example.

* None of the presentation mentioned coral reef, which is considered as a worry in the light of climate effects. Adaptive capacity perhaps depends less on the coastal zone. <> Coastal zone management and studies have been taking coral reef into account. (response from India). (Sri Lanka: The coastal zone management system also takes coral reef into account).

* Coconut and tea production in India: concerning the presentation in the morning, India also produces large amount of tea and coconut, affecting factors to assess the level of vulnerability and other contexts. Local participation is also taken into account.

* Anond Snidvongs: Coastal zone management in Southeast Asia, people tend to look more inland areas as they are agricultural countries. Marine is considered as manor sectors. Even island countries tend to look for the inland culture as well. Policy making is more keen to the inland sectors than coastal and marine zones. Pointed out the Mekong region, which is mostly concerned with inland areas.

* Merilo: The Philippines takes coastal resources seriously, with many programmes funded by international community.

* The chair pointed out the difference in concerns of countries in the workshops as there are different important economic sectors in the regions.

* Concerning economic benefit or loss from climate change impacts which leads to migration, how a community would be effected by the impacts of climate change.

* Economic studies in vulnerability assessment, has been done in Sri Lanka.

* Different context of both the impacts of climate change and economic sectors can be the start of the vulnerability assessment.

* Vulnerability assessment doesn't have to rely on scenario formulation.

* Regional specific studies should be implemented more.

* Xianfu: Global scale assessment can help regional assessment.

Panel 2: Adaptation Opportunities, Barriers and Strategies

Chair: Hassan Virji, Deputy Director, START

Rapporteur: Eileen Shea, East-West Center

Panelists:

- Nguyen Mong Cuong, Team Leader on Vulnerability and Adaptation for National Communication, Vietnam
- Glenn Docemascolo, Asia Disaster Preparedness Center
- Pasha Carruthers, Research and Technical Environment Officer, Climate Change, Cook Islands
- Daniel Murdiyarto, Bogor Agricultural University, Indonesia

Nyung Mong Cuong (Vietnam)

- Brief overview of Vietnam (coastline and river deltas) and highlights of climate vulnerability of key sectors in Vietnam; need for better assessments in/for each
- Recent legislation/policies linking environment, sustainable development and poverty reduction ("raising the people's living standards") in Vietnam
- Progress in building scientific partnerships (government & universities) in vulnerability & adaptation assessment work in context of National Communication

- Barriers include:
 - Lack of appropriate data/ monitoring capabilities & limited access to appropriate data (incl. quality assurance issues)
 - Limited experience with/ access to analytical tools & techniques
 - Scenario uncertainty – climate *and* socio-economic
 - Limited awareness and understanding among public & policy-makers
 - Scientists’ difficulty in communicating technical (V&A) information in understandable language
 - Limited financial support
 - *Institutional arrangements* for V&A studies weak
 - Project focus a limitation

Glenn Dolcemascolo (Asian Disaster Preparedness Center)

- Background on Extreme Climate Events project
 - Note combined efforts at local, national, regional and international levels
 - End-to-end climate information system
 - Start with a basic understanding of climate-society interactions
 - Fundamental link between disaster management and climate adaptation (esp. in Asia-Pacific region) – ref. to work of UNDP expert group highlighting value of building resilience to today’s variability
- Adaptation as “climate risk management”; interest/ perspective of development agencies:
 - “Learning process” aimed at building capacity & resilience
 - Anticipate and respond to climate risk at all timescales
 - Assessing hazards, impacts and vulnerabilities with focus on building resilience
 - Enhancing skills and knowledge
 - Multiple stresses and interacting sectors
 - Impacts and response options
 - Building a climate information and decision support system(s) with continuous feedback from and involvement of decision-makers
 - Focus on operational decision-makers and policy makers
 - Promote flexibility in management and response options
- Mainstreaming climate risk management into *development planning*; development agencies (and donors) can be valuable partners – **an OPPORTUNITY**
 - Requires understanding their decision-making frameworks and the issues/ priorities of interest to them
 - Build on existing organizations, institutions and programs

Pasha Carruthers (Cook Islands)

- Perspectives from a small Pacific Islands country; speaking as a government official involved in facilitating projects like AIACC **and** developing policy

- Long tradition of climate and environmental adaptation in Pacific Islands BUT changes in socio-economic circumstances are changing adaptive capacity:
 - Increasing reliance on new sectors (e.g., tourism)
 - Infrastructure changes and new built environment
- Lack of clarity into how to combine pilot projects with national “mainstreaming” activities into a useful adaptation strategy
- Lack of institutional framework for incorporation of adaptation into development planning – specific reference to climate change in a sustainable development context; whose responsibility is it to facilitate/ensure the cross-ministerial integration?
- Education/awareness to promote a precautionary adaptation – awareness does not, necessarily, mean appropriate action will follow
- Need clearer concepts of what adaptation means

Daniel Murdiyarso (Indonesia)

- Selected examples of Southeast Asia adaptation challenges and opportunities including rice yields, water resources (with implications for agriculture), human health, coral bleaching – “adapt to what?”
- “False” dichotomy between mitigation and adaptation
 - costs of adaptation and mitigation are quite different
 - need to address tradeoffs between conservation and development
 - need more support for adaptation but who will pay?
 - Equity between adaptation and mitigation
 - Adaptation is “non-binding” (as opposed to mitigation) – can this be changed as a proposed strategy
- Opportunities related to UNFCCC, GEF and the “Special Climate Fund”
- Competing agendas/policy interests – local, national, regional global/international
- Issues of participation—need to enhance community participation and preparedness
 - **Local participation**, engagement and capacity to cope needs to be strengthened
- Differential capacities to cope among and within countries – is there a need to prioritize?

Shared Themes and Discussion Issues

- Be creative and inclusive in building our (critical) partnerships – e.g., development planning, disaster management – though those individuals/institutions may not get at all the actors (e.g., local/community stakeholders)

- Serious obstacles to getting individuals (at community-level) to be proactive; esp. at community level – “practical” adaptation
- Need to address differential capabilities within and among countries:
 - Nature of socio-economic context, policy issues/priorities
 - Scientific/technical skills and tools – climate, socio-economic analyses, etc.
 - Human and fiscal resources
 - Access to data and information
 - Awareness of climate change and vulnerability
 - Capacity to adapt/build resilience
- Limitations in funding and human resources, including constraints of donor institutions that may limit local capacity-building (vs. use of external consultants)
- Challenges and opportunities of engaging stakeholders (participation), including:
 - Importance of local/community level
 - Understanding and contributing to existing decision-making frameworks and institutions
 - Decision-makers often interested in both variability & change; address today’s problems and plan for the future
- Challenges of cross-sectoral/cross-ministerial assessment activities and integration of policies/actions in an adaptation context
- Opportunities to capitalize on past/ongoing global change research; are there barriers to its use in developing National Communications? – in other words, how can we improve awareness of and access to the results of global change research on the part of national teams?
- Need/demand for adaptation is present – not future; need sources of funding for adaptation to today’s problems;
 - Need to properly document these adaptation needs in the next round of National Communications
- Addressing climate-related hazards (managing climate risks) is an opportunity, esp. vis-à-vis “mainstreaming” climate adaptation
- Will greater certainty in projections/scenarios help mainstreaming?
- Need to make adaptation more “competitive” with other economic priorities

AIACC Asia-Pacific Region Workshop
25-27 March 2003
Bangkok, Thailand

Following are rapporteur notes from the three-day workshop that followed the open meeting. Most of the presentations are available on the AIACC website (www.aiaccproject.org/meetings/meetings.html).

Day 1 of the Workshop, Tuesday, 25 March

Plenary 1: Opening of AIACC Asia-Pacific Region Workshop

Chair: Anond Snidvongs

Rapporteur: Neil Fernando

Opening the AIACC Asia-Pacific Region Workshop, Dr Neil Leary outlined the workshop objectives as follows:

- Identify problems and their remedies
- Develop cross project collaborations (instead of working individually)
- Share information about researches and research methods
- Obtain feedback from colleagues and stakeholders
- Encourage publication of papers (throughout the process)
- Lay groundwork for summary and synthesis

Although Dr Leary considered the above as workshop objectives, any novel ideas from the participants were welcomed.

He then briefed about the mode of operation of parallel sessions, small group consultations, tutorials and carousels, and finally about plenaries.

Dr R K Pachauri, Chairman, IPCC and Director General, TERI gave a comprehensive talk on state and consequences of global change. He stressed the importance of improved coordination among working groups and involvement of young researchers in climate change research. The need for base the lessons learnt from the TAR when preparing the FAR was also emphasized. FAR expects an improved coordination among working groups towards producing an integrated report to address cross cutting themes. Dr Pachauri also indicated that the FAR is more concerned about the socioeconomic aspects of climate change and would largely focus on developing countries.

A concern raised by the audience is that the nominating best/appropriate persons as candidate authors for IPCC reports by individual governments are not taking place properly especially in LDCs. Dr Pachauri was of the view that the blame should not go alone to government, but the scientific community also should take the lead of putting pressure on their governments to do so.

Another participant emphasized that a very few social scientists are working in climate change studies; so the need for increased participation of them was reiterated. However, no clear actionable program was agreed upon to correct this drawback.

Emphasizing the need of interactive working among climate research groups and increased communication, Dr Pachauri proposed to make use the advances of IT technology, for instance trying to have tele-conferences, perhaps at least once a month.

Dr Alex de Sherbinin, CIESIN gave the next presentation on AIACC/CCSR Web database. He succinctly explained about this database. The database will provide information about the objectives, methods, data, and scenarios of each AIACC regional study. As the studies progress, information about their results will be added to the database. The sources of information for this database were the project profile survey carried out by Dr Cynthia Rosenzweig and Dr. Sherbinin in November 2002. Dr Sherbinin explained the current capabilities of the web database and the next steps that he hopes to do to improve the web service to the AIACC folks. Dr. Sherbinin requested that each AIACC regional study team meet with him before the end of the workshop to verify that information included in the database about their project is accurate and to provide additional information for inclusion in the database. In the future there will be additional requests sent to the regional study teams to get more information about their projects for the database.

Asked Mr Ravi Sherma whether the web and database is only for the AIACC project, and it is not so according to Dr Sherbinin. The database will be accessible to everyone via the web.

One participant indicated that the direct updating of the web by individual research teams would be more effective in terms of keeping the web up to date while reducing overhead costs. Another participant supported this view by suggesting that individual study teams can directly include news and activities, profiles and outputs in the web by themselves. It was agreed that these suggestions would be considered.

Carousel 1: Linking AIACC to Policy and Stakeholders

Chair: Ravi Sharma

Rapporteur: Rodel D. Lasco

The carousel was a brainstorming session intended to elicit initial ideas on how AIACC could forge links with policy processes, particularly the preparation of national communications, and with key stakeholders. The sessions were organized around 3 questions. The discussion of the questions in the carousel is summarized below. The ideas generated during the carousel were returned to in Session E1 on the last day of the workshop.

QUESTION 1: What should be the AIACC objectives in trying to link with policy makers?

- Provide data and results as they become available; in a format that they could understand; synthesis data; simulation tools (could be simple); simple and user-friendly tools esp at the local level; template
- Obtain data/information/needs/gaps from policy makers and stakeholders for use in research (e.g. baseline)
- To raise level of consciousness of policy makers and stakeholders; make CC more real to them; something can be done (e.g. adaptation options); make CC a development issue
- To facilitate more effective participation and implementation of adaptation strategies

QUESTION 2: What groups should AIACC try to link with at the international and regional levels? What strategies should be pursued?

- What is the purpose of this link?
 - To exchange information;
 - to influence adaptation strategies.
 - Donor agencies (for funding)?
 - Influence international negotiations?
- IPCC: scientists as CLA/LA

- Millennium Ecosystems Assessment
- Regional bodies: ASEAN, APN, SAARC, Mekong River Commission, South Pacific Regional Env Program
- Primarily UNFCCC; CBD, Ramsar, UNCCD
- NGOs: Ford, Rockefeller
- Research institutions
- Strategies:
 - CLA and LA for IPCC, MA
 - Negotiation
 - Joint research activity (e.g. IUCN)

QUESTION 3: What types of groups should link with at the national and local level? What strategies should be pursued?

- national and local government; focal points (existing; to be established)
- local communities (e.g youth, women's, religious groups; schoolchildren)
- NGOs
- Strategies:
 - List and identify focal points at various scales (national to local)
 - Estb steering committee to include key stakeholders (e.g. AS25)
 - Work with sectoral groups (youth, women, minority, farmers, schoolchildren, etc.)
 - Newsletter
 - Training workshop
 - There should be some purpose for them to participate
 - Roundtable dialogues

Carousel 2: Planning for AIACC Summary and Synthesis

Chair: Neil Leary

Rapporteur: Roger Jones

Carousel 2 was a brainstorming session intended to elicit initial ideas about possible outputs that could be produced to summarize or synthesize the work done by the different AIACC regional studies. The sessions were organized around 3 questions. The discussion of the questions in the carousel is summarized below. The ideas generated during the carousel were returned to in Session E2 on the last day of the workshop.

What common questions might the AIACC projects address that could serve as a framework for synthesis?

- Linking local and global scales (local effects, global change)
- Common indicators, e.g. living standards
- Adaptation strategies
- How to distinguish between climate adaptation and ongoing development?
- Poverty reduction and sustainable development
- Lessons for enhancing resilience
- Time scales (resolving short and long-term scales)
- Community empowerment
- Capacity building of stakeholders
- Measures of AIACC's success
- Links to poverty reduction, disaster reduction, national development strategies
- Meeting Earth Summit targets
- How transferable are current climate risks for adaptation to future climate?

- Investigating the process
- How to manage multiple stresses?
- Contributing to planning of sustainable development
- Vulnerable groups (gender, ethnic minorities, the poor)
- Equity

What outputs should the AIACC plan for to summarize or synthesize work of the various projects?

- Website (with links to project sites)
- Adaptation measures
- Summaries of key results to provide briefing notes to communities, planners and resource managers
- Presentations
- Contributions to science including the IPCC
- Inform donor organisations
- Methods for evaluating adaptation
- A capacity for undertaking future assessments
- Data continuity (and methods of data management and analysis)
- Output across themes and sectors
- Synthesis of process and of project implementation
- Guidelines for policymakers, policy options and evaluation of policy options
- Identify strategies for targeted output
- Translation of outputs into appropriate language (local languages and comprehension)
- Books – scientific, general interest, educational
- TV show

How should we organize ourselves and what steps need to be taken to produce summary and synthesis outputs?

- Regional and sector outputs
- Projects to manage synthesis – nominate authors etc
- Provide key results as bullet points
- Some outputs may be project specific and some AIACC wide
- How to carry out assessments? Lessons learnt
- Combine individual project summaries
- Use outcomes to test against technical methods outlined in the APF
- Seminar / workshops
- Facilitate local presentations
- Presentations or side events at SBSTA / COP
- Training workshops for policymakers, other scientists etc
- Put together a communication strategy

Carousel 3: Building upon AIACC – A 2nd Phase of Capacity Building

Chair: Anand Patwardhan

Rapporteur: Suruchi Bhadwal

Carousel 3 was a brainstorming session intended to elicit initial ideas about possible follow-ups to the AIACC Project to continue the capacity building begun by the 24 regional studies and associated activities. The sessions were organized around 3 questions. The discussion of the questions in the carousel is summarized below. The ideas generated during the carousel were returned to in Session E3 on the last day of the workshop.

What should be the objectives of a 2nd phase of AIACC?

- Focus on education and training for students and young scientists
- Moving towards actual adaptation
 - Pilot projects
 - Evaluate adaptation options
- Outreach and disseminate findings to stakeholders, policy makers
- South-South collaboration and information exchange
- Capacity building for policy makers and implementors
- Awareness creation amongst local communities
- Build on and lever learnings from 1st phase
- Develop new approaches in assessing vulnerability of agricultural sector, modelling climate and social systems and build adaptive capacity
- Build up the cross-regional collaboration, endeavour to fill up the gap amongst regions.
- Develop more comprehensive and representative case studies

What should AIACC do the same or different in a 2nd phase?

- Develop more effective participatory approaches, engage stakeholders, local communities in capacity building.
- Scholarships and grants for young scientists.
- Develop approaches for cross-regional collaboration, focus on spatial analyses and modelling.
- Develop communications with important stakeholders, communities
- Human dimensions aspects should be given priority.
- Evaluate technical, economic, environmental and social feasibilities for adaptation options.

What types of training or technical support are most needed for a next phase of capacity building?

- More training and research on human dimension aspects of climate change impacts.
- Water resource management.
- Generating in-house technical support
- Information dissemination for the non-professional, build up database and information in readily-accessible format
- Methodologies to monitor changes in the future for example for impacts on biodiversity
- Development of a mechanism to provide data to the end-users.
- Bottom up approach in capacity building. Engage local participation in scenario formulation and data collection
- Sector specific decision support tools to be used
- How do we actually get the findings into the policy and planning process?

Session A1: Climate Data, Trends and Scenarios

Chair: Anond Snidvongs

Rapporteur: Rodel Lasco

Speakers: P. Batima and P. Gomboluudev (AS06). Climate data, trends and scenarios for Mongolia.

Why we are studying climate change ?

v Climate condition and its change are one of the limiting factors for economic development of the country

- v Last 40 years the ecosystem of Mongolia is clearly changed as result of combination of climate change and human activity
- v Mongolian ecosystem is very vulnerable and sensitive to the climate change. Because of severe continental climate
- v The study result gives background understand of the level of potential impacts of climate change on environment and economic sectors
- v Identify the response measures in human life to adapt under changes in climate system

During the last 60 years

- Annual air temperature increased an average by 1.66⁰C this increase was greater in the winter (3.61⁰C), and smaller in the spring (1.4-1.5⁰C)
- Winter warming is more in the high mountain regions, and less in the steppe and Gobi and desert.
- There is no significant changes in annual precipitation amount.

Information about snow cover, and spring and summer runoff trends were also presented for Mongolia. Also presented was initial work to develop climate change scenarios. Projections of temperature and precipitation changes from multiple GCMs were presented.

Speaker: S. Basnakayka (AS12). Climate data, trends and scenarios – the Sri Lankan situation

Information on historical temperature and precipitation presented for Sri Lanka. Also strategy for developing climate change scenarios of the future. Site specific climate drivers are needed for the coconut and tea models to be used in the analysis. Statistical downscaling is the chosen method for downscaling coarse resolution projections of GCMs to the finer resolutions needed for the crop modeling.

Problems encountered so far include:

- Lack of computerized data (some data still in hard copies)
- Downloading of NCEP and GCM from other web sites was also not possible, Because it gives outputs for the whole globe but not for the area which we are interested.
- Downloading NCEP and GCM data has to be postponed for about two months due to the delay of establishment of Canadian web site on NCEP/GCM data to the area which covers Sri Lanka.
- These will be made available at <http://www.cics.uvic.ca> in near future

Speaker: Xianfu Lu (SIS09). A flexible sea level scenario generator.

Research question: what are the likely sea level changes over the next century in the Pacific Islands?

Method: MAGICC will be used to develop global sea level rise projections. Tide gauge records to be collected and analysed for local sea level trends. This information to be combined with global projections to obtain local sea level rise scenarios.

Progress made so far:

- Obtaining tide gauge records for the two case study sites (Fiji & Cook Islands) from PSMSL;
- Analyzing local sea level trends at the study sites;
- Obtaining IPCC TAR-compatible global sea level rise projections;
- Obtaining regional sea level change patterns simulated by (IPCC TAR reviewed) GCM experiments;
- Initial analyses of large-scale sea level changes from GCM patterns and local ongoing sea level change trend

Challenges ahead:

- Relatively short tide gauge records hinder robust analysis of local sea level change contributing factors.
- How to disaggregate the eustatic changes and other components from the observed local mean sea level changes?

Possible solutions:

- Search for and obtain additional tide gauge records from local sources
- Review literature to develop a method to derive local components of relative sea level change.

Session A2: Socioeconomic Data, Trends and Scenarios

Chair: Shuming Bao (AS25)

Speaker: Neil Fernando (AS12). Climate change and socioeconomic impacts in the plantation sector.

Speaker: Juan Pulhin (AS21). Climate change and watershed communities: methodologies for assessing social impact, vulnerability and adaptation.

No rapporteur report is available from Session A2. The presentations given by the speakers are available on the AIACC website (<http://aiaccproject.org>).

Day 2 of the Workshop, Wednesday, 26 March

Session B1: Climate Sensitivities and Impacts- Food, Agriculture, Grazing and Land Cover

Chair: M. A. Wijerantne (AS12)

Rapporteur: Shuming Bao

Speaker: A. Jintrawet (AS07). Simulation impacts of future climate on rice and human in Thailand

Summarized work:

- Combining the rice production model and climate model in evaluating the climate change impacts
- Understanding the rice production system at regional level by simulation
- Rice model from bottom and climate model on the top
- Comparative studies between two regions: Chiang Mai (CNX) and Khon Kaen (KKC)

Rice production and population:

CNX: 1.6 million population

KKC: 1.8 million population

Thailand: 65 million population

Higher rice yield historically in CNX than KKC

Data:

Weather

Weather data: 1985-1999

Predicted weather data from CCAM: 2006-2025

Soil

Roi Et soil data for KKC

San Sai soil data for CNX

Scenario analysis: rice variety by irrigation system and rainfall
Simulation 85-99
Prediction 2006-2025

Simulated rice yields higher than the current level for CNX
Simulated rice yields lower than the current level for KKC

Climate change impacts:
flooding and soil erosion
Too much moisture => more energy to dry
More leaching
Less efficiency of chemical fertilizer

Conclusion:
Possible to evaluate climate change impacts by simulation models
Slight impacts on rice production in next 20 years
Need to develop warning systems

Qs and Discussion:

How to improve the simulation model by integrating data of soil, management, rain, attitude, and others into the model.

Need to differentiate the impacts on the improvement of technology from the climate changes

Speaker: B. Bolortsetseg (AS06). Past and present climate change impacts on rangeland production

Summarized work:

- Review of changes in rangeland productivity and pasture carrying capacity
- Modeling the rangeland ecosystem
- Simulation analysis

Total cultivated agriculture land: 130541.3 thousand ha in Mongolia

Pasture: 97.5%

Hay: 1.5%

Land per person: 53.8 ha

Livestock: 23.6 million

Previous studies:

Geobotanical field surveys: 1950-55

Water resource exploration expedition: 1959-61

Rangeland mapping and expedition: 91-92

Rangeland ecosystems

several belts from west to east

Continuous declining rangeland biomass from 1966-2001

Pasture carry capacity decreased by 27% within last 40 years

Primary factors:

Extended drought

Intensified grazing

Modeling of rangeland ecosystem

Simulation of changes in soil carbon and nitrogen

Soil organic matter increased in north and decreased in south

Simulation of changes in rangeland biomass

Qs and Discussions:

Need to address the policy impacts (bad management by the government in the history) in the analysis

Consideration of changes in estimated parameters in future scenario analysis – sensitivity analysis

Any suggestions on possible adaptation:

Response: changes in the % of livestock and improve the water supply

Session B2: Climate Sensitivities and Impacts - Water Resources, Watersheds, Coasts

Chair: Taito Nakalevu (SIS09)

Rapporteur: Senaka Basnayake (AS 12)

Speaker 1: Suppakorn Chinavano (AS07). Results from Regional Climate Modeling and their future use in Hydrology Impacts in Mekong River Basin

Chairman explained the importance of the Water Resources, Watersheds, Coasts. The speaker explained the outline of the presentation. He added that the study of climate change in Mekong river basin will be based on scenarios of GHG in the atmosphere particularly CO₂ concentration, i.e. 2xCO₂ and 1.5 x CO₂. Regional climate model, which this project is used, is a conformal cubic atmosphere Model (CCAM), in which the output resolution is about 14 km. He emphasised that seasonal shifting has been taken place in the past. With the climate change this will even be worst especially in the areas Lancang basin (20% less), Northern highland (increased rainfall), Koral Plateau (longer and dryer season Eastern highland as well as lowland. Climate change has been greatly influenced in four major sectors, namely agriculture, water supply, human settlements and urbanisation and natural wetland. In agricultural sector, he added that the Lancarn landform will be highly affected by total reduction in precipitation because this area is cultivated under the rain fed agricultural system He also added that significant reduction in water supply in upper Mekong-yunang, but may be less erosion in the water supply sector. Under the human settlement and urbanisation sector, he emphasised that there is more potential for more intense and longer flood in Korat plateau and southern lowland especially in months of September and October. He explained the framework of future studies of the project. Under water resources sector, he explained that how this climate change will affect on precipitation as well as on downstream flows of the concerned river basin. He also explained the modelling approach in SEA basin. He added that the impacts of climate change on aquatic ecosystems will also be studied. At the discussion time the following questions were raised.

Q1: How do you regulate the water flows of the river basin?

A1: by implementing the water policies, by building the dams in the up streams etc. These are some adaptation measures which could lead to control the stream flow.

Q2: Have you run the model with 2xCo₂ and 1.5xCo₂?

A2: Since the 1st run itself is not good enough the model was not run with the above Co2 concentrations.

Q3: Is there any evidence for climate feedback due to land cover change?

A3: According to the observations there has been some evidence of getting less rainfall in the region.

Some experiences of Vietnam were also mentioned with regards to the land cover change. Data availability for the project was also discussed. It was recommended that the baseline data should always be used from a regional body available in the region.

Speaker 2 : Ahsan Uddin Ahmed. Sensitivity of water resources of Bangladesh to climate variability and change

Speaker explained the current situation of the Bhamaputra and Megna River flows. He clearly pointed out that, with the Climate Variability, these areas have already been in high risk situation. He added that, with the climate change these areas even be worst than present situation. He explained how monsoon trough and its associated rains propagate across the Indian sub continent. He explained that the 80% of the annual total rainfall occur between June and mid-October, and 20% occur during the rest of the year. He explained that some severe flood events have been occurred in 1987, 1988 and in 1998 by damaging country's economy very badly. These extreme events will be more intense and frequent with the climate change. He explained that the ET is much higher in the months of April and May; this will be seriously affected with the climate change in the future. Monsoon rainfall projection was also explained with the IS92a scenarios. According to the future projection no. of rainy days will be increased during the monsoon months. He concluded that water resources of Bangladesh are highly sensitive to the current climate change.

The following questions were raised during the discussion time.

Q1: Regarding the infrastructure of the Bangladesh

A1: Railroads were built in such a way to resist to the flood events; however during the 1973 flood events all roads were inundated. Now the situation has been changed. Small flood events have been completely disappeared. Severe flood events have been further intensified and become more frequent.

Q2: Regarding water treaty with India

A2: 30 year water treaty has been signed in 1996. For the 1st time water policy has been implemented in 1999. In 2001 1st national water management plan was commissioned.

Q3: Regarding glaciers melting with climate change

A3: This will enhance the river flow up to 30-40 years. After that rivers could be dried out.

Some feasible adaptation methods for the sedimentation problems were discussed. Some political/institutional barriers of water sharing with India were also discussed.

Session C1: Vulnerability & Adaptive Capacity – Food, Agriculture, Grazing and Land Cover

Chair:

Rapporteur: Attachai Jintrawet (AS07)

Speaker 1: M.A. Wijeratne (AS12). Impact of climatic factors and adaptation measures on productivity of tea plantations in Sri Lanka.

Impacts on tea industry to be considered in the study: farmer's income, employment, foreign exchange earnings and environment.

Climatic characteristics of the main tea growing regions of Sri Lanka were described. The various zones in up country, mid-country and low country areas range from wet to intermediate moisture; temperature differences related to elevation.

Effects of drought of 1992 evident in tea production of all zones. 26% reduction in production and loss of \$70 million USD. Tea sector very sensitive to drought.

Regression methods being used to developed empirical relationships between per hectare tea yields and rainfall. Preliminary results indicate that rainfall is a factor that drives variability in yields. Models perform best in low and mid-country wet zones; not as well in up-country. Also looking at relationships to temperature and also CO2 experiments.

Some adaptations being explored:

- irrigation, limited by water availability
- soil improvements, limited by labour and material
- shade management; limited by management difficulties
- intercropping; possibly limited by lower economic returns compared to monocropping of tea
- diversification of marginal tea lands, may have social implications

Speaker 2: Suruchi Bhadwal, TERI. Vulnerability of Indian agriculture to climate change and globalization: methodology from the CIDA study

Rapporteur notes from this talk are not available. The speaker's presentation is available on the AIACC website (<http://www.aiaccproject.org>).

Session C2: Vulnerability & Adaptive Capacity- Water Resources, Watersheds and Coasts

Chair: Batima Punsalma (AS06)

Rapporteur: Suppakorn Chinvanno (AS07)

Speaker 1: Zhongmin Xu (AS25). Identifying ecosystem vulnerability in the Heihe River region.

The speaker presented a sensitivity matrix to be used to characterise vulnerability in the Heihe River basin. Various methods and models to be used to investigate the sensitivity and vulnerability of ecosystems in the region, including hydro geological models. Working on framework for integrated assessment of ecosystem vulnerability. So similar techniques have been used in the small pacific islands for quantifying vulnerability; approach being adapted to the needs of the AS25 project. One difficulty to be addressed is that different indicators of vulnerability seem to be important for different regions of the basin. Time factors, weighting considerations among various groups present additional challenges.

Speaker 2: Patrick Nunn (SIS09). Vulnerability and adaptive capacity in the archipelagoes of the South Pacific.

Overview of the archipelagoes

- Large ratios of coast length to land area
- Remote, difficult to access
- High dependence on locally available food sources
- Low coastal land highly vulnerable; limited land area available for relocation

- Most environmental decision making is at community level

Water resources

- Pollution from agriculture, urban, waste, industrial, marine placing stress
- New environmental legislation is increasing adaptive capacity, raising awareness
- Vulnerabilities to drought, water scarcity
- Improved public awareness of problems, improved forecasting and management are increasing adaptive capacity to deal with water shortage

Coastal vulnerability

- Low lying, permeable, subject to storms, location of settlements, infrastructure etc mostly on coasts where highly exposed
- 20th century sea level rise has caused inundation, salinisation of coastal lowlands, shoreline erosion
- adaptation has occurred where possible; out-migration where not
- most efforts focused on short-term problems and remedies, not long term – the seawall mindset
- NGOs promoting longer term solutions (e.g. reestablishing mangroves) with some support from governments

Aims of the SIS09 Project

- Improve models for vulnerability and adaptation assessment in the Pacific Islands region.
- Develop the capacity of Pacific Island nations to plan more effectively for future climate change.
- Develop and trial methods of assessment which are transferable to other island regions.

Plenary III: Wrap-up of 2nd Day (March 26th)

Chair: Rodel Lasco

Rapporteur: Pasha Carruthers

Reports were given by individual rapporteurs from sessions B1, B2, C1 and C2. The reports were followed by general discussions. In Session B1 two papers were presented

- 1) Simulation impact of the future rice model, good applications of this model from climate and rice production models
Integrate soil, atmosphere, and salinity intrusion
- 2) Climate change impact grazing land in Mongolia

There was discussion of the need for integrated analysis of soil factors, atmosphere and salinity intrusion in assessing effects on rice yields. Climate change will have very serious impacts on the grazing land productivity with far reaching implications. Analysis thus far does not address policy / management issues, available adaptation options, their potential effectiveness, and capacities and obstacles for their implementation. This is a challenge for all the AIACC projects. Typically there are better developed models and methods for evaluating the biophysical responses to climate; less advanced are the models and methods for looking at human responses and consequences.

In Session B2 on water resources and watersheds, there were presentations on hydrologic impacts of climate change in the Mekong River basin and on the sensitivity of water resources of Bangladesh to climate variability and change.

Comments/corrections on this presentation

- Suppakorn -noted that seasonal shift is expected in the future. Dam – policy, whether dam could be part of adaptation options in the future, dams may have to be adjusted to account for climate change
- Morari - Feedback of Vegetation Changes – which none of the models take into account, but several new studies on this topic may be useful, particularly the simple ones such as IMAGE satellite data,

Ron Loeve gave a brief summary of his tutorial on Future Water that was offered in the morning.

Discussion of the presentation made in Session C1 on tea plantations indicated tea is vulnerable to high temperatures and drought. At present there is not an adequate model for evaluation of climate impacts on tea. To evaluate impacts there is a need to develop a model of tea production and management, similar to those in use for cereals. Development of such a model is one of the objectives of the AS12 project. They are addressing this by first examining empirical relationships between tea yields and climate variables. They will also make use of CO2 chamber experiments to incorporate CO2 effects.

The report on vulnerability in the South Pacific from Session C2 prompted a discussion of short term versus long-term policy responses.

Dr Lal commented that he has changed his mind about the level of accomplishment of AIACC to date. At first he did not think there had been very much progress. Now feels that many of the projects are not far from contributing to the fourth IPCC assessment.

IPCC's assessments continue to improve (3 completed thus far), regional expansion, fourth assessment will have increased emphasis on climate variability and extreme events

There are few reports on extreme events, so this is an opportunity. Lal suggested AIACC projects take a time slice of the last 100 years, look into changes in temperature intensity, rainfall, etc. Not too time consuming, if published will go into IPCC.

Day 3, Thursday, 27 March

Session D: Adaptation Strategies and Evaluation

Chair: Richard Warrick (SIS09)

Rapporteur notes on this session are not available. The speakers' presentations are available from the AIACC website (<http://www.aiaccproject.org>)

Speaker 1: Yin Yongyuan (AS25). Identifying desirable adaptation policies to reduce coastal region vulnerability, an application of multicriteria approach to the Georgia Basin.

Speaker 2: Rodiel Lasco (AS21). Climate change impacts and potential adaptation strategies in watershed areas of the Philippines.

Speaker 3: Ronald Loeve, FutureWater. Impact of climate change and formulation of adaptation strategies in the Walawe basin of Sri Lanka

Session E: Policy, Synthesis and AIACC Future

Sessions E1, E2 and E3 were run sequentially in plenary and not as parallel sessions. These sessions took up the same questions and issues as Carousels 1, 2 and 3. The notes from the

carousels (see above) were circulated prior to the sessions and used as a starting point for the discussions.

Rapporteur: Sara Beresford

E1: Linking AIACC with Policy, Stakeholders

Chair: Rodel Lasco (AS21)

Question 1. What should be the AIACC objectives in trying to link with policy makers and stakeholders?

- Actual adaptation should have more time than 1 year and a half; the community need a longer term to build their own adaptive capacity.
- Need to identify different audiences to show what kind of data and information relevant to stakeholders.
- Data and information should be interpreted in a relevant ways for the policy makers, stakeholders.
- Identify the adaptation projects which can be funded by GEF, UNEP, etc. Work of AIACC can help to identify good projects and facilitate more effective participation and implementation of adaptation projects.
- Engage the important stakeholders in the beginning of the project in order to identify adaptation options in the early phase. Need not (should not) wait till end of the projects to engage with stakeholders and the policy community.
- Getting results of AIACC studies included in National Communications is important; will be an indication that what we have done is relevant to the policy community.

Question 2. What groups should AIACC try to link with at the international and regional levels? What strategies should be pursued?

IPCC process

- Two important goals of AIACC is to have AIACC investigators participate in the IPCC 4th Assessment Report and to have new knowledge from the AIACC studies assessed and cited in the report.
- AIACC has a close connection with IPCC, particularly WGII, and a number of scientists who have participated in past IPCC assessments are involved in AIACC projects.
- Dr Pachauri, Chair of IPCC, who attended the first day of the AIACC workshop, encouraged AIACC participants to play a role in the IPCC assessment activities.
- Authors are primarily selected from government nominations, and those interested in being authors should contact the IPCC focal point in their country to express their interest.
- The AIACC Secretariat will collect CVs of any who are interested in being an author for the IPCC report and will forward to the IPCC Bureau.
- AIACC projects will need to publish papers in peer-review journals in the next 1 to 2 years if they are to be considered in the IPCC's assessment. Papers that are in press or submitted can also be taken into account by IPCC.
- AIACC will establish a working paper series to facilitate preparation of papers for journal publication; will also help to bring the work to the attention of IPCC authors prior to publication.

UNFCCC

- Go to focal points at the national level, provide information in different ways such as WWW, papers, etc . to link the national level to international level.
- Scientist should communicate through CA/RE to lift the findings from national level to regional and international levels.

- Participation of AIACC scientists in events at UNFCCC Conferences of the Parties (COP) and meetings of subsidiary bodies of the UNFCCC can bring our work to attention of senior level policy makers, NGOs and others. These are important venues for providing briefings about research on climate change impacts and adaptations and their implications for action.

Miscellaneous

- IHDP, IGBP, WCRP, Diversitas are key international scientific programmes supporting major projects on global change. Linking our work to the major projects of these organizations will help to further global change research.
- Scientists who have links with CC projects should give advice about funding through GEF.
- AIACC projects could produce briefing documents, presentations and other materials that could be used to inform other organisations about the AIACC projects.
- The Asian Development Bank can play a significant role in adaptation in the near future.

Question 3. What types of groups should link with at the national and local levels? What strategies should be pursued?

- Languages may be a difficulty in communicating at the local level.
- AIACC projects should link with other climate change research and policy communities in the countries in which they are active. Identify other GEF projects in the country/region, other national climate change projects and projects funded by bi-lateral agencies such as CIDA. Contact the participants in those projects to share information.
- Multidisciplinary link with other scientific communities at the national level.
- Groups from different countries should be active in linking AIACC projects to the national level.
- Steering committee, which engages stakeholders, policy makers, should take into action capacity building and other activities.
- Core team should be established at the national level for better communication.
- Take active role in communication with the media at both national and international levels.

Session E2: Planning for AIACC Summary and Synthesis Outputs

Chair: Yongyuan Yin

Question 1. What common questions might the AIACC project address?

- Common questions should be identified for the synthesis report of the whole AIACC project. Similar to process used by IPCC: synthesis questions developed to give general focus to the working group assessments, at end of process IPCC authors drew upon material in the WG reports to answer the synthesis questions in a synthesis report.
- Scientific, methodological questions should be identified in the synthesis reports.
- AIACC projects/groups should identify the gaps in present knowledge; which regions and groups are most vulnerable is not well known – AIACC could help to address.
- AIACC projects should be compared with other larger projects to identify vulnerable groups.
- Robust indicators of who are vulnerable and why they are vulnerable should be identified as an output of the projects?
- How to measure the effectiveness of individual projects to ensure the success of AIACC? Important that AIACC perform an evaluation of its effectiveness. Different task from the scientific synthesis.

Question 2. What outputs should the AIACC summarise or synthesise? And Question 3. Organisation and steps to produce summary and synthesis

- Maps can be used as a communicating means for the stakeholders, successful experience from China is illustrated to support the idea.
- Joint publications should be developed amongst the groups.
- National journals can be a source of output.
- Scientific publications (technical reports, working papers) of AIACC can be done to inform scientific community about what AIACC groups have done.
- AIACC might organize a special issue of a peer review journal that would include papers from different AIACC projects.
- Alternatively, AIACC projects working on similar problems might write “companion” papers that are sent together to a journal with a suggestion that they be published in the same issue. An short overview paper might be written to accompany the papers. This can be done more easily than producing a special issue of a journal.
- Progress reports might be made more technical and a way to communicate with other groups and outside world. *(Note: later it was decided that progress reports should be relatively short documents that summarize the work that has been done in general terms; technical details of the work should be addressed in working papers, written with the intent that they would eventually be submitted to a journal for publication.)*
- A working paper series should be established and circulated via the AIACC website. Would provide a centralized place for others to get easy access to papers describing the work and results of AIACC studies. The AIACC list-serve could be used to advertise and inform others when there are new papers available. Working papers would have a common “look” with AIACC logo and would give credit to funding sources. Such a series can facilitate the process of getting papers published in peer-review journals.
- AIACC Data, Methods and Synthesis Website. AIACC, working with CIESIN, is developing a website that will provide information about all AIACC projects in an easily accessible database. Information will include project objectives, summary of workplan, description of methods being used, climate and socioeconomic scenarios, and data. As the AIACC studies progress, information about findings will be added. This resource will be open to all, both AIACC participants and any other interested persons.
- A CD-ROM of all progress reports across the region should be contributed to working groups

Session E3: Building Upon AIACC – a 2nd Phase of Capacity Building
Chair: Anand Patwardhan

Question 1. What should be the objectives of AIACC in a 2nd phase?

- Science and research should continue to be at core of what AIACC does; there is little money to support climate change research in developing countries; AIACC is filling an important need that few others are addressing.
- Niche for AIACC: bridge from science to policy. AIACC should be research oriented, adding to knowledge and innovative methods and applying these in support of adaptation.
- Capacity building for young scientists to include scientific research.
- The second phase should move towards adaptation and mitigation options. Some question about how far to go in this direction. Implementation of adaptation projects beyond the scope we should take on; developing the knowledge, methods and scientific/ technical capabilities to increase the effectiveness of adaptation strategies is more appropriate for AIACC.

- An AIACC 2nd phase should stay focused on what we are doing but emphasize more on communications with important stakeholders.
- The AIACC should combine both research and actual adaptation at a later date.
- Who should take part in the future of AIACC in both research and actual adaptation? General sentiment was that present regional study teams should have an opportunity to continue with the research and capacity building begun in phase 1 and that new groups also have an opportunity to participate. There should be a mix of both continuing and new projects.

Question 2. What should AIACC do the same and what should it do differently in a 2nd phase?

- Identify what we have done so far and see what we can do next.
- Expand the communication between the groups and outside community to get more expertise.
- Capacity building should include more issues in a broader context of climate change and development (active New Zealand experience is mentioned, should be done the same in developing country with appropriate aspects).
- Objectives should be identified quickly for applying funding.
- Identify gaps raised in the first phase.
- How to improve multidisciplinary projects?
- Include more projects from countries who do not have a project from AIACC at present.
- For current projects that wish to continue, should set up a process by which outside, independent reviewers evaluate performance and provide recommendation on continued funding.
- Identify synthesis questions in the beginning to have a consistent output.

Question 3. What types of training or technical support are most needed for a next phase of capacity building?

- Many groups already have a link with water resources management, expand more links with climate change impacts.
- A series of workshops, team of mentors providing basic methods should be developed more in the next phase.
- Grants for capacity building to each group within AIACC project. This was added in the current phase after the first year with a grant from USAID; would be good to put this in place from the start in a 2nd phase.
- Training workshops came too soon in phase 1 for many of the projects to fully benefit. Initial workshops might be more orientation to lay framework for subsequent training. Should make significant use of investigators from the phase 1 group of projects to plan and implement workshop.
- Could then follow with more training workshops. Focus them on specific areas identified as needed in the orientation. More “hands-on” training with tools that can be applied in the projects. Perhaps run on smaller scale – not global workshops that cover multiple topics. Regional, dealing with smaller range of topics and methods.
- Emphasize new methodologies in training workshops, also what is going on with projects of AIACC.
- AIACC should include some evaluation system to improve effectiveness in the next phase.