MAIRS Overview 2013

Ailikun
MAIRS IPO

Monsoon Asia Integrated Regional Study (MAIRS)
It collaborates with the Earth System Science Partnership Programs: IGBP, WCRP, IHDP and DIVERSITAS
MAIRS Working Groups

- High mountain
- Dryland
- Urban
- Modelling and observations
MAIRS Theme Workshops 2013

- **4-5 March 2013, Tokyo, Japan**
  - Asia Urbanization and its regional/global impact

- **27-28 March 2013, Guangzhou, China**
  - Climate change adaptation strategy in downstream region of Himalayas in Bangladesh

- **17-29 July 2013, Haler, China**
  - Dryland ecosystem and sustainable development

- **27-28 August 2013, Kathmandu, Nepal**
  - Regional climate modelling and its implication in South Asia jointly with CORDEX
Dryland Projects


- MOST international project “Disaster and risk management in Mongolian Plateau”, Heqing HUANG, 2012-2015

- APN CAPaBLE: “Capacity Building to Study and Address Climate Change-induced Extremes in Northern Asia” (MAIRS-NEESPI joint activity), 2012-2014

Urban Projects

- APN ARCP project: Development of an integrated climate change impact assessment tool for urban policy makers, 2012-2015

- Chinese Academy of Science/Netherlands Organization for Scientific Research: climate change and water supply in Pearl River Delta, 2011-2014

- JST-MOST joint program: Impact of Asian Megacity Development on Local to Global Climate Change, 2010-2013
Modelling Studies

- Land surface (ecosystem) modelling inter-comparison
- Regional urban climate modelling project
- Regional Modelling Inter-comparison Project
- Joint activity with WCRP CORDEX across Asia
Regional Climate Modeling Intercomparison Project (RMIP)

- Regional projections for 2040-2070 with uncertainties by 12 regional models
- Data sharing
- Development of integrated assessment tool for urban policy and planning
- High-resolution precipitation events
- High-resolution urban simulations
- High-resolution mountain simulations
Joint activity with WCRP/CORDEX

- Activity Funded by APN “Coordinated Regional Climate Downscaling Experiment (CORDEX) in Monsoon Asia” (2013-2016)
- Main Collaborators: KMA, NJU, CMA, IITM, ICIMOD, CSIRO, BMKG, MNU
- CORDEX South Asia workshop, 27-30 August 2013, Kathmandu, Nepal
- CORDEX Southeast Asia workshop, Nov 2014, Citeko, West Java, Indonesia
- CORDEX East Asia workshop, Nov 2015
CORDEX South Asia workshop

- 27-30 August 2013 in International Centre for Integrated Mountain Development (ICIMOD), Kathmandu, Nepal
- About 70 experts from 16 countries with more than half from end-users’ group, 2.5 days for science workshop, 1.5 days for training
- Jointly organised by WCRP, MAIRS, IITM/CCSR and ICIMOD
- Co-sponsored by APN, MAIRS, WCRP and IITM
1. Establishing the data supporting frame in CORDEX Asia (download, documentation, evaluation, parameter recommendation for different users) depending on the current data centers in 3 regions.

2. Developing downscaling supporting frame in CORDEX Asia (key scientists and core institutes), including dynamical and statistical downscaling
3. Set up “CORDEX Asia end-users’ forum” by recognizing key institutes and organizations in assessment research of Hydrology, agriculture, ecosystem, land cover/use change and human health et al.

4. CORDEX Asia Training supporting mechanism by appointing core institutes and organizations
Important meetings for CORDEX Asia 2013

- WCRP CORDEX Conference, 4-7 Nov., 2013 in Brussels, Belgium
- CORDEX Asia side meeting, 10:00-13:00, 8th Nov., 2013 in Brussels (Contact: Michel Rixen: mrixen@wmo.int, and Ailikun: aili@mairs-essp.org)
- CORDEX Southeast Asia preparation meeting, 18-20 Nov., 2013 in Jakarta, Indonesia. (Contact: Fredolin Tangang: ftangang@gmail.com)
MAIRS and Future Earth in Asia

- MAIRS promotes cross-cutting research across Asia
- MAIRS SSC initiative, in consultation with RIHN, APN, ICSU ROAP and WCRP, to draft initial science plan for Future Earth in Asia
- Workshop in Hong Kong in 31 July-2 Aug 2013
- Support the workshop on Future Earth in China, 26-27 Sep 2013, Beijing
- Draft being finalized for comments by broader community
Objectives:
✓ To report the latest research on integrated studies in Asia-Pacific region
✓ To promote the research of both natural and social scientists
✓ To promote the research by young scientists from the region
✓ To promote multi-disciplinary studies and the new ICSU-ISSC Future Earth in Asia-Pacific region
✓ To discuss the implementation of the Future Earth initiative
AAMP-MAIRS collaborations

- Memo of discussion on AAMP-MAIRS collaboration
- Date: 25th March 2013, Guangzhou Baiyun Hotel
- Participants: M Manton, Tianjun ZHOU, Ailikun
- Taken by Ailikun

MAIRS is focusing on the research of human interactions with Asian monsoon and promoting the inter-disciplinary studies in the region. MAIRS could be an important partner to AAMP to apply the coupled climate models’ outputs to other users. We propose 3 collaboration areas as potential AAMP/MAIRS/CORDEX joint activity:
AAMP-MAIRS collaborations

- Monsoon interaction with agriculture and the feedback of land cover change in Asian dryland (including both East Asian and South Asian dryland) on monsoon
- Interannual variability of Asian monsoon and its impact on agriculture
- Evaluation and comparison of Asian monsoon behavior (intraseasonal to interdecadal variation, future projection) in GCM and RCM

The next actions are: (1) to decide on a topic(s), and (2) to prepare a work plan. It is proposed that we may firstly set up a MAIRS-AAMP working group to develop a collaborative workplan for one or more of the proposed areas, 1 joint workshop is proposed, inviting MAIRS relevant scientists to join the 13th AAMP meeting to be held on 26-27 Oct 2013 in Macau, China.