

# 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

- CDKN project on “Climate Compatible Development in Dryland Systems of Mongolia and Surrounding Asian Systems”, D. Ojima, K. Gavin and Chuluun, 2012-2014
- 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
- APN ARCP: “Assessing spatiotemporal variability of NPP, NEP and Carbon sinks of global grassland ecosystem in respond of climate change in 1911-2011”, Jianlong LI, 2013-2016

# 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 Inter-comparison 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



# Key Messages from CORDEX South Asia Workshop

**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**

# Key Messages from CORDEX South Asia Workshop

**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](mailto:mrixen@wmo.int), and Ailikun: [aili@mairs-essp.org](mailto:aili@mairs-essp.org))
- CORDEX Southeast Asia preparation meeting, 18-20 Nov., 2013 in Jakarta, Indonesia. (Contact: Fredolin Tangang: [ftangang@gmail.com](mailto: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 31July-2Aug 2013
- **Support the workshop on Future Earth in China, 26-27 Sep 2013, Beijing**
- Draft being finalized for comments by broader community

# Future Earth in China

26-27 Sep 2013, Beijing





# MAIRS Open Science Conference 2014

## Future Earth in Asia

April 7-10, 2014, Beijing, China

### 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 13<sup>th</sup> AAMP meeting to be held on 26-27 Oct 2013 in Macau, China.