

**A Continuation to Regional Climate Model Intercomparison
Project for Asia (APN 2001-05)**

Project Leader:

Prof. Congbin FU
START Regional Center for Temperate East Asia
Institute of Atmospheric Physics
Chinese Academy of Sciences
Beijing 100029
CHINA
Tel: +86-10-6204-1317
Fax: +86-10-6204-5230
Email: fcg@tea.ac.cn

A Continuation to Regional Climate Model Intercomparison Project for Asia (APN 2001-05)

APN Funding

US \$68,000

Participating Countries

Participants from Australia, China, India, Japan, Republic of Korea and United States were funded partially by APN project 2001-05. They were also funded by their own related national projects. Scientists from the Democratic People's Republic of Korea, India, Mongolia and Russia were also involved in project activities, such as contributions to the station database for model validation.

Introduction/Background

In order to evaluate the advantages and disadvantages of different RCMs so that better projection of regional climate change can be provided, an APN/START Regional Climate Model Intercomparison Project (RMIP) for Asia was initiated in 2000 to examine the performance of an ensemble of RCMs in terms of their capacity of simulating regional climate change in Asia. The RMIP project was originally designed in 2000 into three phases. Phase One (2000-2001) is an 18-month simulation; Phase Two is a 10-year simulation to examine the statistical behavior of model capacity; Phase three is the simulation of climate change in Asia in the 21st century by RCMs nested with GCM.

Between April 2000 and March 2001, the 18-month simulation took place by 10 participating groups. A preliminary analysis on surface climate was accomplished. A summary workshop was held from February 27th to March 1st, 2001 in Beijing to discuss the products of the preliminary analysis. In order to understand the results of surface climate simulation, the meeting decided to continue the RMIP project in two aspects in the fiscal year 2001-2002. Firstly, it was strongly recommended to further analyse other important outputs from the 18-month simulation such as atmospheric circulation and land surface physics, etc. Secondly, to conduct the necessary preparation for Phase two, a 10-year simulation from 1989 to 1998.

Outline of activities conducted

New collection of RCM 18-month run's outputs of 10 models and their procession

- (1) Further analysis and inter-comparison study on the 18-month simulation.
- (2) Preparation of the 10-year run.
- (3) A summary workshop of phase one was held on 11-13 December 2001 in Kobe with 25 participants from participating groups.

Outcomes/Products

- (1) Project summary report of phase one to APN.
- (2) Proceedings of the summary workshop, including 17 papers, to be published by the end of March 2002.
- (3) A joint paper to BAMS, formal submission by the end of March 2002.
- (4) A number of collaborative papers to be submitted to journals.

- (5) Data bank, including main variables of 18-month simulation of 10 models, 514 stations data for validation.
- (6) CDs containing the preliminary assessment report of 10 models and all data sets created during the first phase with total amount of 360TB.
- (7) Web sites of RMIP Phase one.

Future direction/Follow-up work

- (1) Accomplishment of 10-year run of RCMs (July 1988 – December 1998, first 6 months for spin up time of soil moisture initialization) driven by new NECP reanalysis data. The model outputs of 10-year run will be submitted by the end of October 2002.
- (2) A workshop to summarize the preliminary analysis of the 10-year simulation (1989-1998) will be held in February 2003. The summary report and journal papers will also be produced after the workshop.
- (3) As phase 3, DARLAM/Australia, RIEMS/China plan to initiate the simulation of RCM nested with GCM to make projection of climatic change in the 21st century. The preliminary analysis of the simulation results will be presented by the end of February 2003.

Project Leader

Prof. Congbin FU
START Regional Center for Temperate East Asia
Institute of Atmospheric Physics
Chinese Academy of Sciences
Beijing 100029
CHINA
Tel: +86-10-6204-1317
Fax: +86-10-6204-5230
Email: fcg@tea.ac.cn