

Inter-CSE Transferability Study (ICTS) of the Water and Energy Simulations and Prediction (WESP) Working Group

Full Name: Inter-CSE Transferability Study (ICTS)

Reporting Period: 10/2005 – 09/2006

Starting Date: 09/2003

URL: <http://icts.gkss.de>

Chair and Term Dates: Burkhardt Rockel

Objectives:

- Study the transferability of regional climate models to areas of different continental scale experiments (i.e. to different climate regimes)
- Apply CEOP (satellite, reference sites, global analysis and model data) and other available observational data sets to validate the energy and water cycle in regional models
- Assess the influence of different driving global re-analysis

Status: Past Year Activities:

Five out of eight models finished the five years simulation (2000-2004) with fixed set up for each of the seven CSE regions. The data has been sent to the ICTS archive at GKSS. These data are called level 1 data and are accessible by ICTS members for checking and analyzing. Data will become level 2 data and will be sent to the official CEOP model data archive at DKRZ/MPI Hamburg, when it has been checked. The data set of the regional climate model RSM from ECPC has already been sent to the official CEOP model data archive, though it will be replaced by results from an advanced model version at a later time.

The group at Iowa State University started analyzing the daily cycle of surface parameters. They compared the MOLTS from model simulations against reference data measurements. Results are part of a publication in BAMS by the transferability working group (TWG) within GHP.

New Directions:

Some groups are going to perform model simulations with different set ups for different regions. The kind of set up is based on the analysis presently carried out for the fixed set up simulations. Simulations with a different set of boundary conditions and simulations with higher resolution are also follow-up options.

A possible ICTS2 based on CEOP2 data may be a future activity. However, it has not been discussed yet.

Future: Next Year's Foreseen Activities:

Not all model groups have finished their simulations and/or delivered their results yet. Within the next year these groups are going to finish their simulations and send the data to the ICTS archive.

The check of data already existing in the ICTS archive (level 1 data) will be completed. The data are going to be transferred to the official CEOP model archive at DKRZ/MPI Hamburg (level 2 data) and thereby made available for the scientific community.

Further analysis of ICTS results will be undertaken. Different groups are going to concentrate on different aspects. These are e.g. investigation on the diurnal and seasonal cycle, simulation of high-time frequency (initially daily timescale) precipitation across seasons and varied climatic regime (as encompassed by the ICTS domains and CEOP data availability).

Issues and Recommendations:

- Intensification of communication, exchange of knowledge with related projects in GEWEX

Summary:

Within the last year simulations with five out of eight regional climate models for the ICTS period 2000-2004 has been finished and sent to the ICTS archive. Analysis of the data has started. After first analysis data are going to be transferred to the CEOP model data archive at DKRZ/MPI Hamburg.

List of Key Publications

Takle, E.S., J. Roads, B. Rockel, W.J. Gutowski Jr., R.W. Arritt, I. Meinke, C.G. Jones, and A. Zadra, 2006, Transferability intercomparison: An opportunity for new insight on the global water cycle and energy budget, submitted to Bull. Amer. Soc.

Meinke, I., J. Roads, and M. Kanamitsu, 2006, Evaluation of the RSM Simulated Precipitation During CEOP, submitted to J. Meteorol. Soc. Japan

Rockel, B., I. Meinke, L. Roads, W.J. Gutowski Jr., R.W. Arritt, E.S. Takle, and C. Jones, 2005: The Inter-CSE Transferability Study, *CEOP Newsletter*, **8**, 4-5.

List of meetings, workshops

EGU 2006 (session and splinter session together with the transferability working group TWG).

Informal meetings at several other meetings.

Planned meetings, workshops

EGU 2007 (session and splinter session together with the transferability working group TWG).

Informal meetings at several other meetings.

List of Members:

Raymond Arritt

William J. Gutowski Jr.

Colin Jones

Beate Geyer

John McGregor

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Dominique Paquin

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