



Community-wide Consultation on Model Evaluation and Improvement

Please complete the following template by writing your answers into the boxes below the questions, sending any supplementary material such as clearly labeled figures in a separate file. Please submit your response electronically by **15 January 2010** to Anna Pirani at apirani@princeton.edu.

Q1: Please state your particular area of interest, e.g. global or regional climate or NWP modeling, seasonal prediction, sea-ice feedbacks, monsoons, troposphere-stratosphere exchanges, etc.

- (1) Regional NWP
- (2) Global NWP as a user of information from major centres

Q2: Given your interest, what would you consider/identify as the KEY uncertainties/deficiencies/problems of current models? What do you think should be evaluated/improved as a priority in models in terms of parameterization and/or interactions among processes? (Give references and/or one key figure where possible)

- (1) From the perspective of a centre doing regional NWP based on downscaled global model data with added local data assimilation, land surface modelling needs improvement. It would be useful to have a global, high resolution land surface analysis from a major centre, which also includes datasets of relevant and dynamically updated information on soil moisture, seasonally changing land cover, etc.

Q3: Do you see a particular gap (in knowledge, in observations or in practice) that would need to be filled, or a particular connection between different modeling communities or between modeling, process studies and observations that should be made a priority?

- (1) Small R&D groups away from major centres may be able to contribute more to the joint, community development of the major global models if they were modularized and open source.
- (2) International exchange of weather radar data to be used for global and regional assimilation
- (3) Better links between meteorology and geo-sciences to exploit ground-based GPS observations, and for land process observations and research

Q4: Do you see any particular resource or opportunity within the modeling/process study/observational/theoretical community (e.g. new results, new observations) that would be particularly useful and should be exploited to tackle this problem?

- There is an opportunity to create global real-time datasets (including land surface information) with the specific purpose of facilitating regional NWP
- AN opportunity for making use of weather radar data if it is internationally exchanged

Q5: What would best accelerate progress on the topics raised in questions 1-4? Do you have suggestions for new initiatives (new process studies, field campaigns, or new collaborative approaches, eg international Working Groups, Climate Process Teams)?

- The TIGGE-LAM initiative under THORPEX could be a means of organizing such global real-time datasets
- Presumably international exchange of weather radar data comes under CBS; however WGNE could assist in promoting this by proving its value through research studies

Q6: Any other suggestions/issues to be raised?