

*Workshop report: A global concerted action to address the disconnect between numerical model development in research and policy practice in the natural environment.*

*Numerical Modelling – Policy Interface (NMPI) Workshop, Stuttgart Germany, 12-13 March 2007*

Although the application of models for environmental management is now ubiquitous, there remain serious problems with their efficacy and the context within which they are developed and applied. This is the case in all nations in the world; developed, developing, and those in transition (e.g. China). Models are often conceptualized, developed, applied and evaluated without proper reference to the policy and management context for which they are intended. When applied to investigate sustainability at many spatial scales, this low level of interaction between model developers (e.g., scientists and engineers), model users (e.g., policy-makers, planners, and resources managers) and the stakeholders affected by model results is not only likely wasteful, but potentially harmful. A thorough reassignment of the rationale behind the development and use of environmental models is an imperative, especially in an era of rapid climate change.

Against this background, approximately 40 experienced environmental science researchers and practitioners from eight countries and four continents took part in the 1st Numerical Modelling - Policy Interface (NMPI 2007) workshop organized by the University of Stuttgart; Germany and the British Geological Survey (BGS) to share their experiences and build a research network.

Some key hypotheses on incentives and obstacles to the use of environmental management models in policy analysis advanced here were that:

- Attitudes to risk-management need to be examined carefully and the balance between risk of an event occurring and severity of the event considered;
- Universal issues exist whatever the context of model application;
- There may be many obstacles to model use in the developing world; the potential, however, exists to apply modelling to layout development pathways to “leap frog” over some traditional development problems;
- A particular challenge in countries in transition (CIT) is that they are perhaps too highly driven by short term economic gains to use environmental models to better consider externalities and;
- In the developed world, the power and extent of various stakeholder groups and their interaction can be key to sound decision-making.

Should modellers start thinking more like policy makers to overcome obstacles? What is the future of such approaches as combining modelling with joint fact finding? Are policy makers concerned about the problem of model uptake?

One of the recommendations for the development of a network included establishing a secretariat to facilitate communication. Having established that the issues facing numerical modellers and policy makers are known and tractable, the next workshop is planned to investigate why projects still fail. This meeting will be held in Nottingham,

England, organized by the British Geological Survey, and is set for the 20 – 21<sup>st</sup> of June 2007.

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