

## Quantitative assessment of ecosystem service vulnerability to climate change

Wolfgang Cramer, Potsdam, and ATEAM Members

Evaluation of IPCC Reports and other assessments with respect to their usability in ecosystem management for adaptation reveals that recent advances in conceptual, experimental and observational ecosystem science have not yielded proportional advances in understanding for management. We postulate that this situation is mainly due to, i) a poorly defined vulnerability concept in many assessment studies, ii) insufficient representation of local-to-regional features in climate-ecosystem studies, and iii) inappropriate consideration of uncertainty, particular that in climate change scenarios. We propose a framework for overcoming all three concerns and show preliminary results from a European multisectoral assessment (ATEAM).