

*“promoting the goal of sustainability requires
the emergence and conduct of a new field
of **sustainability science**”*

Statement of the Friibergh Workshop on Sustainability Science, Sweden,
October 2000

CORE QUESTIONS

- **How can the dynamic interactions between nature and society—including lags and inertia—be better incorporated into emerging models and conceptualizations that integrate the Earth system, human development, and sustainability?**
- **How are long-term trends in environment and development, including consumption and population, reshaping nature society interactions in ways relevant to sustainability?**
- **What determines the vulnerability or resilience of the nature-society system in particular kinds of places and for particular types of ecosystems and human livelihoods?**
- **Can scientifically meaningful "limits" or "boundaries" be defined that would provide effective warning of conditions beyond which the nature-society systems incur a significantly increased risk of serious degradation?**

- **What systems of incentive structures-including markets, rules, norms, and scientific information-can most effectively improve social capacity to guide interactions between nature and society toward more sustainable trajectories?**
- **How can today's operational systems for monitoring and reporting on environmental and social conditions be integrated or extended to provide more useful guidance for efforts to navigate a transition toward sustainability?**
- **How can today's relatively independent activities of research planning, monitoring, assessment, and decision support be better integrated into systems for adaptive management and societal learning?**

Source: Robert W. Kates (*et al*) *Science* 292: 641-642.

Key features of Sustainability Science

- Value and problem-driven
- Prospective – forward looking
- Dynamic interactions of complex ecological and social systems
- Multi-scale
- Inter- and trans-disciplinary
- Entails simultaneous application of research and practice
- Uncertainty and precaution
- Explicitly engaged in social learning

- **Sustainable Development Research Network**
www.sd-research.org.uk
- **International Dialogue on Science and Practice in Sustainable Development: Linking Knowledge with Action**
www.sustdialog.org
- **International Initiative on Science and Technology for Sustainability (ISTS)**
<http://sustainabilityscience.org>