Sustainability Science

For current research see:
Sustainability Science Program at Harvard University
Science, Environment and Development Group (Clark and Dickson)
Forum on Science and Innovation for Sustainable Development

Project summary documents: "**Science and Technology for Sustainable Development**" Special Feature in the *Proceedings of the National Academy of Sciences of the United States of America* (8 July 2003)

Our work in sustainability science seeks to advance understanding relevant to the sustainable development of coupled human-environment systems. Research to date has characterized a "sustainability transition," developed a framework for analyzing the vulnerability of human-environment systems, and analyzed what makes knowledge systems effective in harnessing science and technology for sustainable development.

Characterizing a Transition to Sustainability

This research explores the long-term trends of social and environmental change that will most strongly shape the challenges and opportunities facing efforts to promote a transition toward sustainability. It analyzes the relevant goals and targets for human development and environmental protection that have been sanctioned by the international community, and evaluates the indicators that have been posed to assess progress in attaining them.

Vulnerability Analysis of the Coupled Human-Environment System

We have developed a conceptual framework to structure research on the vulnerability of coupled human-environment systems. Case studies of the Yucatán peninsula, Yaqui Valley, and pan-Arctic were used to evaluate the strengths and weaknesses of the framework, both for guiding integrated analysis of relevant linkages and feedbacks and for identifying gaps in information and understanding needed to reduce vulnerability in the overall systems.

Knowledge Systems for Sustainable Development

This work seeks to understand what determines the effectiveness of systems intended to link knowledge to action in support of sustainable development. It has shown that such systems manage to balance perceptions of the salience, credibility, and legitimacy of the information they produce, and that they do so through attention to "boundary organizations" that are neither research establishments nor decision makers but are accountable to both.

Contact the project webmaster with any comments, questions, or problems.
For information about related activities, visit the Science, Environment and Development Group web site.
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