ISIE
PLENARY

SCHEDULE: **8:30 – 9:30am, Tuesday, July 1, 2003, Hale Auditorium**

TITLE:

Industrial Ecology after Johannesburg: Contributions to the Plan of Implementation?

ABSTRACT:

The media and environmental groups had pronounced the World Summit of Sustainable Development a failure already before the event started in August 2002 in Johannesburg. Indeed, the WSSD failed to produce the firm commitments on the actions needed to achieve sustainable development. Governments failed to take action on the scale needed to stop global warming, water-borne diseases, toxic pollution of oceans and developing countries, to preserve biodiversity, and to reduce resource exploitation to sustainable levels. The political climate for such drastic breakthroughs was just lacking. What got lost in the summary dismissal of the event, however, are a number of positive signs emerging from Johannesburg. There is a number of items that are of interest for Industrial Ecology. The Johannesburg Plan of Implementation calls for the establishment of a 10-year framework of programmes in sustainable consumption and production. At the same time, there were hopeful signs of cooperation among industry and civic society. Actions on renewable energy, clean water, and biodiversity are also of potential interest to the industrial ecology community. In this panel, we will explore how the field of industrial ecology can contribute to the implementation of sustainable development, both through developing the scientific basis for the actions required and through developing tools and evaluation methods for the policy measures.

BIOGRAPHY

ROLAND CLIFT

Distinguished Professor of Environmental Technology and founding Director of the Centre for Environmental Strategy at the University of Surrey; previously Head of the Department of Chemical and Process Engineering at the University of Surrey. He is a member of the Royal Commission on Environmental Pollution, of the International Expert Group on application of Life Cycle Assessment to waste management and of the Rolls-Royce Environmental Advisory Board, and a past member of the UK Ecolabelling Board. Professor Clift is Visiting Professor in Environmental System Analysis at Chalmers University, Göteborg, Sweden.

FAYE DUCHIN

Professor of economics at Rensselaer Polytechnic Institute in Troy, NY. She has been involved for many years in analyzing scenarios about the future using mathematical models and databases of individual economies and the world economy. She is working on a framework for describing household lifestyles and has developed a new model of the world economy for analyzing scenarios about future changes in consumption and production. Her recent books are *Structural Economics: Measuring Changes in Technology, Lifestyles and Environment* (Island Press, 1998) and *The Future of the Environment* (with Glenn-Marie Lange, Oxford University Press, 1995).

EDGAR HERTWICH

Adjunct professor of energy and process engineering at the Norwegian University of Science and Technology and deputy director of the Industrial Ecology Program. He has worked on life cycle impact assessment and chemical fate and transport modeling. His research now focuses on sustainable consumption and production, as well as the environmental aspects of energy systems. Until recently he was a research scholar at the International Institute for Applied Systems Analysis, where he has worked on methods to evaluate sustainable consumption policy measures.

DARA O'ROURKE

Assistant professor in the Department of Environmental Science, Policy, and Management at the University of California, Berkeley. His research focuses on the environmental, social, and equity impacts of global production systems and new strategies of democratic governance. He is currently studying changes in industrial production and supply chain management systems that affect pollution and workplace health problems, and systems for monitoring these impacts. Dr. O'Rourke has worked extensively with community-based organizations and NGOs in the US and Asia. Recent books include *Can We Put an End To Sweatshops?* (Beacon Press 2001, with Archon Fung and Chuck Sabel), and *Community-Driven Regulation: Balancing Development and the Environment in Vietnam* (MIT Press, forthcoming).

Statements by the Panelists:

Professor **Roland Clift**: Industrial Ecology After Johannesburg

Careful analysis of the outcome of the World Summit on Sustainable Development unfortunately confirms the criticisms: of the agreements and pronouncements, the proportion which are both new and SMART is almost vanishingly small. Positive actions following Johannesburg are likely to occur out of the limelight of international conferences. So the conceptual developments in industrial ecology will need to be directed to national sectors and specific industries.*

*SMART : Specific, Measurable, Achievable, Realistic and Timely

Professor **Faye Duchin**: Sustainable Consumption: A Challenge for Industrial Ecology

In this presentation I distinguish the kinds of options available to consumers for incremental or for radical changes in consumption patterns and the underlying lifestyles that they reflect. I indicate how the kinds of models and data used by Industrial Ecologists to analyze production options – material flow data, life cycle analysis and input-output models -- can be adapted and extended for analysis of changes in consumption. Industrial Ecology researchers have been accustomed to providing input to the business and policy communities, and I discuss the challenges we face to provide effective analytic support for consumer decisions.

Dara O'Rourke will comment on the role of civil society actors and transnational advocacy networks in pressuring governments and multinational corporations to alter economic development policies and practices. He will discuss a range of NGO critiques of the Johannesburg Summit, and critiques of corporate responses to current environmental and social problems. These critiques pose significant challenges for the field of industrial ecology, pushing it to move beyond incremental, "win-win" strategies, to larger-scale reforms of industrial systems, and to a potential "public interest industrial ecology."