

“System Dynamics Modeling -- A Tool For Learning in a Complex World”

Andrew Jones

The Sustainability Institute, North Carolina, USA

Abstract of Conference

The persistent challenges that society and business face often share common characteristics. They defy quick fixes, they build and dissipate slowly over time, they are rarely "owned" by any one player in the system but affect all, and their components are highly interrelated. The analytical approach of system dynamics, which was invented in the 1950s at MIT, addresses such “systems” problems. This approach uses diagramming and simulation modeling to help groups of people improve their understanding of how to improve the performance of a range of social/physical systems, from organizations to populations.

This presentation will address the unique perspective of system dynamics and cover several examples of its application from several real world engagements.

Topics Covered in Workshop

- Motivation for Systems Dynamics
- Introduction to System Mapping
 - Stock and Flow Diagrams
 - Causal Loop Diagrams
 - Interactive Exercises
- Introduction to Stella/ithink Software
- Building a System Dynamics Model
 - Participants build a “learning model” in pairs
 - Content area: Managing renewable resources – business and environment