

# RESILIENCE 2011

## Resilience, Innovation, and Sustainability: Navigating the Complexities of Global Change

Second International Science and Policy Conference, Tempe, Arizona, USA

March 11-16, 2011, Arizona State University



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Welcome to the **Conference Website for Resilience 2011**, a conference that will bring together scientists from a broad spectrum of disciplinary backgrounds who are interested in the major science and policy challenges that face us all as a result of global change. The conference is organized around intellectual themes that aim to integrate knowledge from multiple perspectives.

This website will provide all the necessary information you need to register for the conference, submit your abstract, find accommodation, plan social events and field trips and find your way around the conference venue.

Enjoy,

The Conference Team.



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The aim of "**Resilience, Innovation and Sustainability: Navigating the Complexities of Global Change**" is to advance understanding of the relationships among resilience, vulnerability, innovation and sustainability. It will do so by bringing together scientists to share their work on the dynamics of interconnected social-ecological systems. Conference attendees will include people from the government, business, NGOs and academic sectors concerned with resource governance, and economic and social development . A key outcome of conference discussions will be the development and refinement of new ideas for meeting the challenge of global change.

## The Context

Human societies are an integral part of the biosphere and, as the [Millennium Ecosystem Assessment](#) suggests, are dependent on the capacity of the living environment to provide essential ecosystem services to sustain social development. At the same time, human activity has expanded to such a degree as to now constitute a global, interdependent society that shapes the biosphere at multiple temporal and spatial scales as reflected by climate change, vulnerability in global economic and financial systems and resource degradation across the globe. How can prosperous societal development paths be stimulated in light of these challenges?

Sustainability is a guiding principle in the search for such development paths. Resilience and innovation are important tools to successfully navigate them. Research on resilience - the capacity to deal with change and continue to develop - has evolved as we progressively understand the complexity of interconnected social and ecological systems. Increasingly, we realize that social and ecological systems exhibit strong non-linearities and are prone to dramatic changes. Innovation is a key element in our capacity to cope with these changes.

Interest in resilience, innovation and sustainability is growing rapidly in science and policy circles. New knowledge in these domains has major local-to-global implications for a range of issues including social and economic development and security. Research on actors, networks, multilevel institutions and organizations with the ability to respond to ecosystem feedbacks, sustain and enhance flows of ecosystem services is expanding. Knowledge integration that crosses boundaries between the natural and social sciences, between sciences and humanities and between culture groups will contribute significantly to improving policy to cope with global change. Resilience 2011 seeks to promote such knowledge integration and builds on the highly successful Resilience 2008 conference held in Stockholm last year, organized by the Stockholm Resilience Center. The School of Sustainability, the Global Institute of Sustainability and the School of Human Evolution and Social Change at ASU have agreed to host Resilience 2011 on the ASU campus. We ask you to hold the date for this major international conference, at which we expect colleagues from a wide range of disciplines and all parts of the world.



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The objective of **Resilience 2011** is to bring together representatives from a number of different communities that have not widely overlapped before. The conference is designed to strengthen such trans-disciplinary and cross-thematic ties by embracing the diversity of disciplines and skills required to address growing concerns about the long-term sustainability of the current **global human-environmental system**

. Sustainability relates to understanding how change in human-environmental systems impacts human welfare and social and economic development. Resilience focuses on understanding how human-environmental systems self-organize and transform. Resilience and sustainability are clearly intimately intertwined and both resonate with practical efforts in policy, governance and stewardship. Conference events and activities seek to develop understanding of these relationships across multiple temporal and spatial scales and levels of organization to enhance the collective capacity for environmental governance and stewardship at all scales. The themes for Resilience 2011 attempt to organize ideas around key knowledge domains and action arenas in order to further develop this understanding.

The themes are listed below. We encourage those organizing sessions and panels to consider including perspectives on theory, empirical evidence and critical analysis; on education and training; and on communities of practice. In addition, we seek to feature work within each theme that includes perspectives developed from studies of issues and processes over the longue durée and that address robustness-vulnerability trade-offs that society faces given the uncertainty associated with global change.

### ***Themes:***

1.

#### **Adaptation, resilience, vulnerability, and coping with change in social-ecological systems**

Papers and panels in this theme will emphasize how people, groups, organizations, and systems experience vulnerabilities, build resilience, and adapt in the face of change. This theme seeks to integrate thinking across social and biophysical sciences – especially across resilience-based system-level conceptions of vulnerability, adaptation and geographical-science-based household-level conceptions of these issues.

2.

#### **Thresholds and regime shifts in social-ecological systems**

Papers and panels in this theme will emphasize developing understanding of how social-ecological systems self-organize within regimes, endogenously generate thresholds that define different regimes and how systems undergo shifts between them. Of special interest is the idea of regimes and regime shifts in social systems – e.g. social traps.

3.

### **Knowledge, innovation, and social-ecological learning**

Papers and panels in this theme will emphasize developing understanding of the role that knowledge plays in the self-organization and dynamics of social-ecological systems as well as the *dynamics* of knowledge itself as generated by the processes of learning and innovation. Papers and panels will also address learning and innovation as endogenous processes generated by social-ecological dynamics.

4.

### **Governance, polycentricity, markets, and multilevel challenges**

Papers and panels in this theme will emphasize developing understanding of how institutions and governance structures influence the self-organization and dynamics of social-ecological systems. Of particular interest is the interaction of multiple, polycentric systems operating across multiple levels of organization and multiple temporal and spatial scales.

5.

### **Analyzing and framing resilient development, resilient resources and security**

Papers and Panels in this theme will emphasize resilience as it relates to management questions related to specific resource systems (fisheries, forests, rangelands, etc.), economic development, and human security and well-being. Topics may also include resilience and state security and the broadening and deepening of security to encompass new arenas such as the outcome of global financial crises, civil contingencies and human security. This theme is motivated by the fact that the term resilience is being used more widely in policy circles and policy debates to describe goals for government policy, yet the meaning may be at odds with resilience theories that emphasize change and transformation.

6.

### **Transformation in social-ecological systems**

Papers and panels in this theme will emphasize transformational change. When does further adaptation mean maladaptation? How can we identify when transformational change is necessary? What are the elements of transformability and the processes involved in transforming? How does it relate to the broader body of work on transitioning (e.g. the Transition Town movement in the UK and the DRIFT program in the Netherlands)?