



Urbanization and Global Environmental Change

AN IHDP CORE PROJECT

International Conference on Urbanization and Global Environmental Change “Opportunities and Challenges for Sustainability in an Urbanizing World”

Arizona State University, Tempe, AZ

October 15-17, 2010

Concept Note

We now live in the “Century of the City”. Urban areas are central to the demographic, economic, and environmental challenges of the 21st century. The size, form, structure, and function of urban areas and their future growth trajectories are critical elements in the transition to global sustainability. At the same time, world-wide challenges such as increases in surface temperature, accelerated sea level rise, biodiversity loss, and declines in water availability and supply pose particular threats to urban areas due to their location and concentration of people and economic resources. Urbanization is a major component of global environmental change, while at the same time global environmental change poses threats to urban areas. Especially given the rapid pace of urban growth in middle and low income countries, there is an urgent need to understand the bi-directional interactions between urbanization and global environmental change processes. And most importantly, how can urbanization be promoted as an opportunity for sustainability?

The first Open Science Conference of the Urbanization and Global Environmental Change (UGEC) Project is an international effort to bring together scientists, practitioners, policy makers, and stakeholders to understand the multi-faceted interactions between urban areas and global environmental change. The conference seeks to build a forum for reflection, exchange of knowledge, experiences, lessons, ideas, and information, contributing to the creation of efficient strategies for urban sustainability. The structure and approach of the conference is specifically designed to foster dialogue among participants. Oral presentations and posters are encouraged to communicate the knowledge and lessons learned from research projects and practices.

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The UGEC Open Science Conference invites presentations and posters on the following broad topic areas:

1. Effects of and responses to climate change in urban areas. Human beings have always had an intimate relation with climate. The changes in climate have varied effects on urban systems at different spatial and temporal scales. Current attention to climate change at the local, national, regional, and international level creates opportunities to improve urban responses for mitigation and adaptation to climate change. The conference will focus on the complex and diverse bidirectional interactions between urban areas and climate change.

2. Land use and land cover. Urban land change is one of the most profound human interventions in the Earth System functioning, especially at the local and regional levels. Focusing on the theme of land use/cover changes in the context of urbanization and global environmental change, the conference will explore – among other themes - How are urban areas growing and are expected to grow in the next 50 years? What is the function of new urban lands (informal vs. formal settlements)? What are the implications of this urban spatial development and growth of extended metropolitan zones for biodiversity, prime agricultural lands, local and regional climates?

3. Biodiversity, habitat conservation and urban areas. Economic growth in urban areas is often associated with increasing demand for natural resources at the regional and global levels. Urban processes and their impacts have the potential to disrupt ecological functions both close to and at a distance from the urban core. The conference will explore the effects of interacting urban processes on biodiversity and habitat conservation through analytical papers covering ecological footprints of urban areas, ecosystem services and their benefits, urban-based conservation efforts, and the links to a sustainability transition.

4. Public health. Global environmental change has significant impacts on the health of urban populations. International attention to the health consequences of climate change has enhanced the importance of considering public health as a fundamental element of the global environmental processes. Changes in biodiversity, increased sea level rise, alterations of the hydrologic cycle, and other global environmental processes have significant health consequences for urban inhabitants. We welcome contributions on the health implications of global environmental change in urban areas and the ways through which urban processes aggravate or facilitate the impact of global environmental change on health.

5. Governance and institutions. Pressing issues brought forward by global environmental change may fundamentally alter our preconceived ideas of what constitutes good urban governance. The conference will explore: What is the relative role of formal and informal institutions in the responses to climate change and biodiversity loss? What is the role of integrated urban, transportation, and environmental planning? What are the interactions between actors, such as non-governmental organizations and the private sector? The conference will showcase the importance of governance issues as a cross-cutting theme.

We particularly encourage contributions that exhibit an innovative set of approaches. We would like to see the five topic areas listed above explored from the perspectives of case studies, integrated analysis, science-policy linkages and outreach and action:

Regional perspectives through case studies. The UGEC open conference invites oral presentations and posters analyzing the lessons learned from case studies on the interactions between urbanization and global environmental change in diverse regional settings. The conference welcomes a wide range of case studies, particularly those that focus in coastal areas, arid lands, the humid tropic, mountain and temperate zones. Analytical papers may focus on biogeographic regions but also geopolitical regions.

Constructing integrated approaches for urban areas and global environmental change. The UGEC open conference encourages reflective presentations on conceptual and methodological challenges for constructing multidimensional and integrated approaches of the interactions between urbanization and global environmental change. The conference seeks to build a dialogue about the construction of useful knowledge for urban sustainability and future research and operational agendas.

The UGEC Open Science Conference is organized in close cooperation with the [Global Land Project \(GLP\)](#), who will host their Open Science Meeting from October 17-19, 2010. GLP is a joint research project for land systems for the [International Geosphere-Biosphere Programme \(IGBP\)](#) and the [International Human Dimensions Programme \(IHDP\)](#). Both UGEC and GLP will convene on Sunday, October 17th under the theme of *“Sustainable Land Systems in the Era of Urbanization and Climate Change”* in order to focus jointly on themes surrounding the urban, land, and climate change interface. The goal of this day is to build contacts and networks among urban and land-change specialists to foster more collaboration worldwide, expanding the range of issues addressed. Abstracts are welcome under the following topics:

- **Direct and indirect interactions of urban areas and land use changes.**
- **Competition for land.**
- **Urban areas and climate impacts.**
- **Impact of urbanization on a large scale (beyond urban areas), biogeochemical cycles and ecosystem functions.**
- **Sustainable cities in arid areas.**