



Urbanization and Global
Environmental Change

AN IHDP CORE PROJECT

UGEC VIEWPOINTS

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Urbanization: A Critical
Human Dimension of Global
Environmental Change



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Chronic Vulnerability in Niger Republic: A Challenge to Urbanization

Oluyemi Fayomi

The Sahel Region is one of the poorest and most environmentally damaged places on earth. Low productivity per land unit is a challenging feature of most dryland ecosystems. Limited rainfall inputs, small and highly localized surface water resources, scant or non-existent vegetation, and low population totals all combine to place constraints on the total productive capacity of both the cultural and physical components of dryland ecosystems. The biggest security threats faced in Africa and in particular, the countries in the Sahel Region of Africa, are economic and social threats including poverty, infectious diseases, and environmental degradation. Most importantly, ecological disaster has become a serious concern to the Sahelian people, particularly in light of climate change impacts. These are concerns of immense importance when one is to consider the preparedness of the Sahel Region for fast-paced urbanization.

Niger Republic, a Sahel country, ranks 177 out of 177 countries in the United Nations Development Programme Human Development Index (2006), thus, ranking it as the poorest nation in the world. The country suffers from endemic poverty, as over 60% of the country's 11.5 million people live on less than one dollar per day. In spite of some progress within the health and education sectors, progress towards the UN Millennium Development Goals is still slow and difficult. In 2004, a severe drought and subsequent locust invasion destroyed up to 100% of the crops in some regions, causing food shortages for more than one third of the population. According to a World Health Organization (WHO) report (2005), an estimated 800,000 children under five years old suffered from hunger, of which 160,000 were moderately malnourished and 32,000 severely malnourished. The most affected were the poorest and most vulnerable agro pastoral regions of Tillaberi, Tahoua, Marah, Diffa, Agadez, Zinder and Gaya. In these regions, pregnant and lactating women, totaling 261,300, and children were most at risk (Niger Fact Sheet, 2005). Furthermore, the majority of Nigerien families are subsistence farmers and livestock breeding plays a key role for these agro pastoralist families. Any loss of livestock or decreases in the market value deprives the household of its major resource and exposes it to food insecurity. Many actions have been taken towards reversing



Downtown Niamey, Niger at night

the effects of degraded lands, but the unknown mechanisms of desertification encroachment can impede results.

Today, there are many strong forces transforming the world; environmental and economic forces are rearranging relations among nations. As the process of globalization accelerates, the United Nations will find itself confronting many of the world's challenges. United Nations agencies specializing in humanitarian efforts have provided relief materials to the victims of ecological disaster in Niger. However, the emergency programs were limited to the provision of relief food, resettlement of destitute pastoralists and sometimes, salvaging livestock. Huge sums were spent on imported relief food to feed drought-afflicted pastoral peoples and other rural communities in Niger Republic, but more attention was given to food supply rather than health risks associated with malnutrition – such as the increase in death from disease outbreaks among people that had been weakened by malnutrition. It is imperative to note that the excessive use of relief food creates dependency and erodes people's initiative to support themselves. Hence, land developments can only occur in view of these concerns and challenges and must be in line with the sociological, political and ecological systems to which these areas within the Sahel Region and Niger in particular, are best adapted.

The references for this article are available on our website: <http://ugec.org/docs/ViewpointsIssue2References.pdf>

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The Urbanization and Global Environmental Change (UGEC) project is a science project that targets the generation of new knowledge on the bi-directional interactions and feedback loops between urban areas and global environmental change at local, regional and global levels. It follows a multi-disciplinary approach and utilizes an innovative framework for the comprehensive understanding of the driving and resulting economic, political, cultural, social and physical processes. An important feature of this core project is the explicit commitment to translate abstract knowledge about GEC into local decision-making contexts. The project is expected to provide a platform for close interaction between practitioners, political decision-makers and researchers and targets a stronger coordination and collaboration between academics, political decision-makers and practitioners working on urban and environmental issues. The UGEC project is currently engaged in ongoing efforts to expand its regional and thematic networks.

Our website provides links to the UGEC Science Plan, information on how researchers can join our network as project associates, and how research projects and agencies can get their projects endorsed by UGEC (www.ugec.org). You can assist us in achieving our goals by forwarding this newsletter to any potentially interested party. Visit www.ugec.org for more information.



IHDP

International Human Dimensions Programme on Global Environmental Change

The International Human Dimensions Programme on Global Environmental Change (IHDP) is an international, interdisciplinary science programme, dedicated to promoting, catalysing and coordinating research, capacity-development and networking on the human dimensions of global environmental change. It takes a social science perspective on global change and works on the interface between science and practice. IHDP is a joint programme of the International Council for Science (ICSU), the International Social Science Council (ISSC) and the United Nations University (UNU).

IHDP was founded by the International Council for Science (ICSU) and the International Social Science Council (ISSC) of UNESCO in 1996, and has been a key programme of the United Nations University (UNU) since January 2007. Financed by a broad range of agencies from different countries, IHDP's research programme is guided by an international Scientific Committee made up of reputable scientists from various disciplinary and regional backgrounds.

IHDP fosters high-quality research. The dynamics of climate change, land-use and land-cover change, interactions between institutions and the global environment, human security, sustainable production and consumption systems as well as food and water issues, urbanization and the global carbon cycle are investigated in the context of global environmental change. Visit www.ihdp.unu.edu for more information.



GLOBAL INSTITUTE of SUSTAINABILITY

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The Global Institute of Sustainability is the hub of Arizona State University's (ASU) sustainability initiatives. The Institute advances research, education, business practices, and the University's operations for an urbanizing world. Its School of Sustainability, the first of its kind in the US, offers transdisciplinary degree programs that explore and advance practical solutions to environmental, economic, and social challenges.

With over 30 years of environmental research conducted by ASU's Center for Environmental Studies, in 2004, it evolved into the Global Institute of Sustainability established by Julie A. Wrigley. In 2007, the School of Sustainability was formed, offering undergraduate and graduate degrees in sustainability.

The Institute has a comprehensive sustainability research portfolio with a special focus on urban environments. More than half of the world's population lives in cities: global sustainability cannot be achieved without making cities sustainable.



1st International UGEC Science & Practice Conference

**Arizona State University, Tempe, Arizona
15-17 October 2010**

The Urbanization and Global Environmental Change project will host the 1st International UGEC Science & Practice Conference from October 15-17, 2010 at Arizona State University. In the past three years, a growing number of researchers and practitioners have expanded our understanding of the importance of urban areas for global environmental change research. The UGEC project has been driving a stronger collaboration between academics, decision-makers, and practitioners, exploring emerging themes within the framework of Global Environmental Change (GEC) science, focusing on the bidirectional interactions and feedback loops between urbanization and GEC.

The 1st International UGEC Science & Practice Conference will fill the need for a single comprehensive, interdisciplinary and integrative conference open to scientists, policymakers and the general public. The conference will provide a wide perspective of current knowledge of the dynamic and complex interactions between urbanization and global environmental change. It will also discuss the best alternatives to operationalize that knowledge in urban governance in high-, middle- and low-income countries.

More details will be available soon on our website: <http://www.ugec.org>



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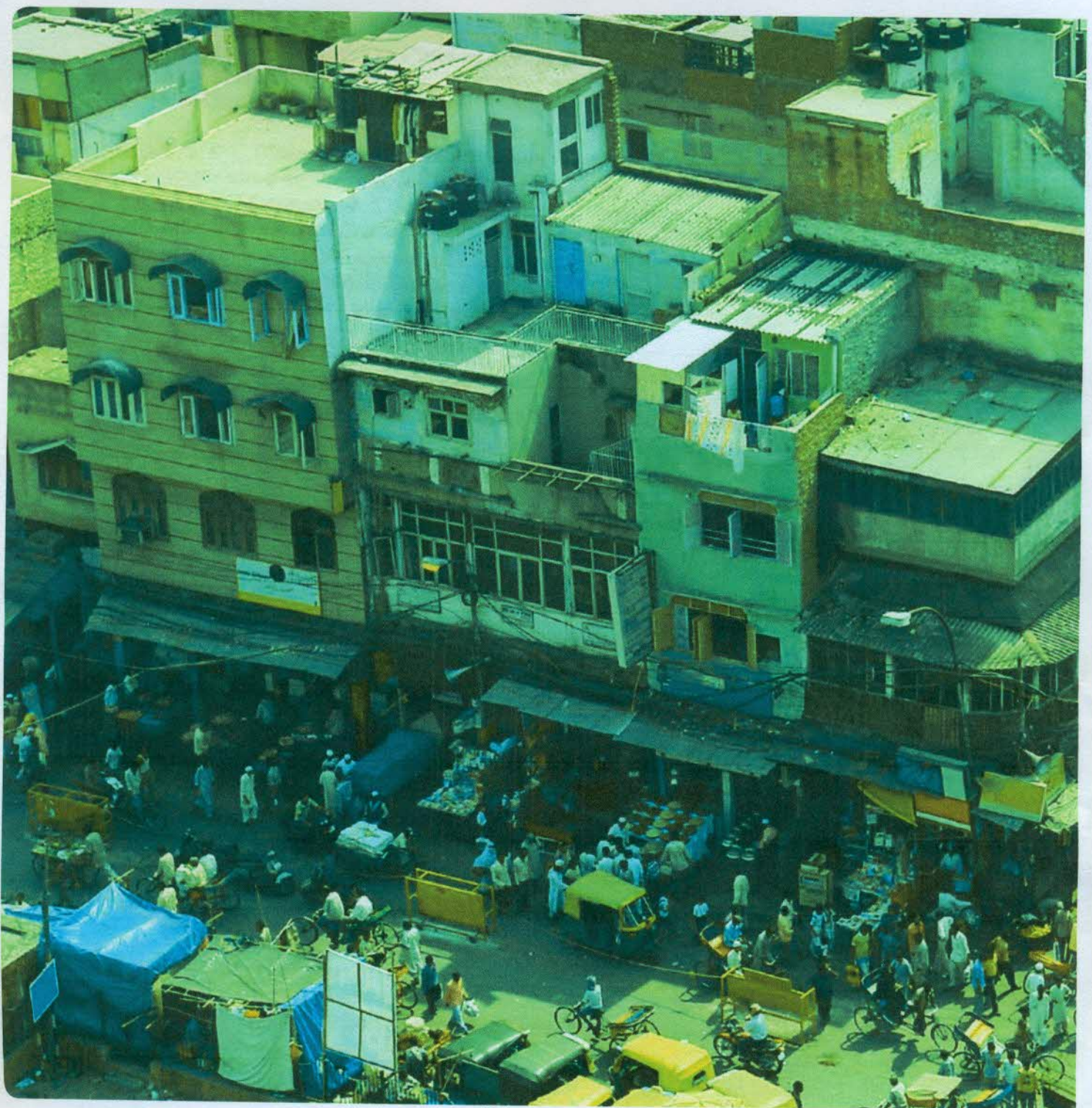
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Hierarchy of Urban Areas in the Brazilian Amazon and Its Environmental Implications

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