



Building Urban Resilience

Assessing Urban and Peri-urban
Agriculture in Ibadan, Nigeria



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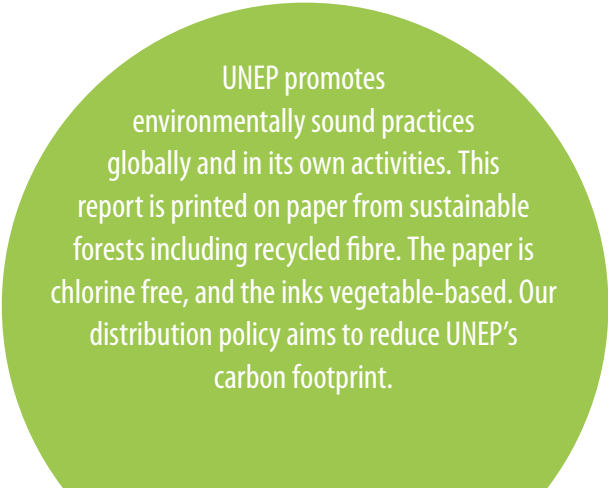
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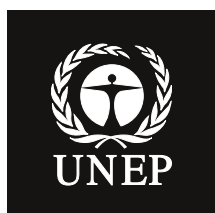


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Building Urban Resilience

Assessing Urban and Peri-urban Agriculture in Ibadan, Nigeria

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Preface

Food production in and around cities is an integral part of the urban fabric in much of the developing world. In these regions, urban and peri-urban agriculture (UPA) plays an important role in diversifying urban diets and providing environmental services in urban and peri-urban areas. As such, there is growing interest in UPA as a strategic component of urban resilience and climate change adaptation planning. However, advocacy for UPA in this capacity is outpacing the body of evidence regarding important stressors and drivers that act on UPA. Such knowledge is especially critical in the developing world where urban areas are experiencing rapid growth and transformation. In these regions, UPA is facing intensifying pressures from urban encroachment, waste disposal, pollution, and climate change that may undermine the sector's long-term viability.

The need to better understand these critical sustainability dimensions provided the impetus for city-level knowledge assessments of UPA, whose main findings are contained in nine underlying assessment reports including this one. The assessed cities were Dakar (Senegal), Tamale (Ghana), Ibadan (Nigeria), Dar es Salaam (Tanzania), Kampala (Uganda), Addis Ababa (Ethiopia), Dhaka (Bangladesh), Kathmandu (Nepal) and Chennai (India). All of the reports and the synthesis report can be found at <http://start.org/programs/upa>. The assessments were conducted in 2012, with initial stakeholder engagement beginning in 2011. The assessments were led by city-based teams, the composition of which varied, with some of the teams being comprised predominately of researchers and other teams comprising of a mix of researchers, city officials and urban NGO representatives.

The assessments seek to better understand the changing nature of UPA systems, and the critical interactions at the land-water-climate nexus that influence resilience of UPA in rapidly growing developing-country cities. The audience for these assessments includes national and city-level policymakers, sectoral experts and city planners, the research community, and non-governmental organizations (NGOs) that interface with urban farmers and other actors within the broader UPA sector.

The UPA assessments are part of a larger project on strengthening understanding of critical links between climate change and development planning in West Africa, East Africa and South Asia. The premise for the project is that progress towards undertaking effective action to address climate change risks in these regions is hindered by low levels of awareness of global climate change, lack of understanding of the findings of the Intergovernmental Panel on Climate Change (IPCC) and other sources of scientific information, lack of location and sector specific knowledge, and the need for strengthening capacities to undertake integrated assessments that support decision making. This multi-year project has been a collaborative effort between the World Meteorological Organization (WMO), the United Nations Environment Programme (UNEP), START, the University of Ghana, the University of Dar es Salaam, and the Bangladesh Centre for Advanced Studies (BCAS).



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The overall project and the associated UPA assessments were made possible in large part thanks to funding provided by the European Commission (through project ENV/2008/149690 *‘Understanding the Findings of the Intergovernmental Panel on Climate Change (IPCC) Fourth Assessment Report “Climate Change 2007”—Integrating Climate Change Adaptation and Mitigation in Development Planning’*), as well as by the United Nations Environment Programme (UNEP), and the Global Climate Change Programme at the US Agency for International Development (USAID). The editors of this series wish to thank these organizations for their financial support.

In addition to the numerous authors listed in each of the separate reports, we are grateful to the following people for providing useful insights and feedback during the early conception of the knowledge assessment, and helpful review comments on the various manuscripts: Rafael Tuts, Anna Skibeveag, Stephen Twomlow, Elizabeth Migongo-Bake, Trang Nguyen, Volodymyr Demkine, Jane Battersby, Marielle Dubbeling, Anna Kontorov, Richard Munang, Jesica Andrews, Fatoumata Keita-Ouane, Jacqueline McGlade, Keith Alverson, Stuart Crane, Martina Otto, Robert Yennah, Beverly McIntyre, and Tom Downing. We would also like to express our sincere appreciation for the generous support of colleagues at the University of Cape Town’s *Climate Systems Analysis Group* who with the climate projections for six African cities.

Acronyms and abbreviations

ADP	Agricultural Development Programmes
AFAN	All Farmers Association of Nigeria
CAFAN	Catfish Farmers Association of Nigeria
CBOs	Community-Based Organizations
CIP	Climate Information Portal
CMIP5	Coupled Model Intercomparison Project Phase 5
DESA	Department of Economic and Social Affairs of the United Nations
FAO	Food and Agriculture Organization of the United Nations
FEWS-Net	Famine Early Warning Systems Network
FGD	Focus Group Discussion
GCMs	General circulation models
GDP	Gross Domestic Product
GPS	Geographical Positioning Systems
IDRC	International Development Research Centre (Canada)
IMF	International Monetary Fund
IPCC	Intergovernmental Panel on Climate Change
IWMI	International Water Management Institute
LGAs	Local government areas
NAPA	National Adaptation Programme of Action
NFDP	National Fadama Development Programme
NGO	Non-Governmental Organizations
NLDP	National Livestock Development Programme
NMA	Nigerian Meteorological Agency
NPC	National Population Commission
NPK	Nitrogen (N), phosphorous (P), potassium (K)
MMT	Mean Maximum Temperature
OMF	Organo-Mineral Fertilizer
OYSADEP	Oyo State Agricultural Development Programme
OYSEMAS	Oyo State Emergency Management Agency
RCP	Representative Concentration Pathway
RUAF	Resource Centres on Urban Agriculture and Food Security
SAP	Structural Adjustment Programme
START	System for Analysis, Research, and Training
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNICEF	United Nations Children's Fund
UPA	Urban and Peri-urban Agriculture

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Executive summary

This report presents the findings of a knowledge assessment on urban and peri-urban agriculture (UPA) for the city of Ibadan, Nigeria that was conducted in 2012. It examines the state of UPA in the city through the lens of intensifying urban pressures and increasing climate risks with the objective of identifying how these and other drivers potentially interact to affect the long-term sustainability of UPA, and what response options are needed to address existing and emerging challenges. The assessment is intended to:

- 1) describe the dominant characteristics of urban and peri-urban agriculture, and identify key knowledge gaps in these UPA systems;
- 2) explore the array of stressors that contribute to vulnerability of UPA systems to climatic and other environmental changes; and
- 3) identify critical areas for strengthening policies and institutional capacities that contribute to sustaining the UPA sector within the larger context of resilient cities and food systems.

The rapid expansion of urban centres in Nigeria brings both opportunity and peril with respect to food security. Urbanization and urban growth are taking place against a backdrop of adverse economic policies linked to the removal of subsidies on fertilizer and fuel, persistent high inflation, rising unemployment and extreme climate events, all of which impact on the country's food security. Urban and peri-urban agriculture is increasingly viewed as an option for helping to meet the food and nutritional security needs of burgeoning cities in Nigeria. However, the sector faces substantial obstacles and challenges to its long-term sustainability stemming from haphazard urban sprawl and accompanying land-use changes, widespread pollution and other forms of environmental degradation that create health hazards for producers and consumers of food grown in and around urban centres, increasing risks to production systems and food chains from extreme climate events, and lack of visibility in urban development policies and planning frameworks. These are all important issues in Ibadan.

Addressing the various sustainability challenges that UPA faces requires addressing critical knowledge

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