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IWMI Research Report

153

Facilitating Outcomes:

Multi-stakeholder Processes for Influencing Policy Change on Urban Agriculture in Selected West African and South Asian Cities

Priyanie Amerasinghe, Olufunke O. Cofie, Theophilus O. Larbi and Pay Drechsel









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IWMI Research Report 153

Facilitating Outcomes: Multi-stakeholder Processes for Influencing Policy Change on Urban Agriculture in Selected West African and South Asian Cities

Priyanie Amerasinghe, Olufunke O. Cofie, Theophilus O. Larbi and Pay Drechsel

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Front cover photograph shows farmers, traders and extension staff participating in a traditional Durbar festival during the National Farmers Day in Accra, Ghana (Source: IWMI).

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Acronyms and Abbreviations

AMA Accra Metropolitan Assembly (also: Accra Metropolitan Area)
AWGUPA Accra Working Group on Urban and Peri-urban Agriculture

CBO Community based Organization

CSA City Strategic Agenda

CSIR Council for Scientific and Industrial Research, Ghana FASDEP Food and Agriculture Sector Development Policy

FCC Freetown City Council, Sierra Leone

FUPAP Freetown Urban and Peri-urban Agriculture Project

GHG Greenhouse gas

GKVK Gandhi Krishi Vignana Kendra

IAGU Institut Africain de Gestion Urbaine, Senegal

IDRC International Development Research Centre, Canada IFUPA Ibadan Forum for Urban and Peri-urban Agriculture

IWMI International Water Management Institute
JDPC Justice Development and Peace Commission

KNUST Kwame Nkrumah University of Science and Technology, Ghana

LGA Local Government Areas M&E Monitoring and evaluation

MAFFS Ministry of Agriculture, Forestry and Food Security, Sierra Leone
MDP Municipal Development Partnership for Eastern and Southern Africa

MoFA Ministry of Food and Agriculture, Ghana

MoU Memorandum of Understanding

MPAP Multi-stakeholder Policy Formulation and Action Planning

MS Multi-stakeholder
MSF Multi-stakeholder forum
MSP Multi-stakeholder processes
NGO Nongovernmental organization

RUAF Resource Centres on Urban Agriculture and Food Security STEPRI Science and Technology Policy Research Institute, Ghana

ToR Terms of reference UA Urban agriculture

UPA Urban and peri-urban agriculture WRI Water Research Institute, Ghana

Summary

In order for research to influence decision makers, different approaches to facilitate the impact pathways are possible. Multi-stakeholder Policy Formulation and Action Planning (MPAP) is one approach that can be used to facilitate long-term policy change. In this approach, stakeholders are engaged in a participatory manner and carefully guided through a series of processes to achieve the desired outcomes. In this report, we explain how the MPAP approach has been used to influence and/or change policies that govern urban agriculture (UA) practices in three African and two Asian cities.

At the outset, a MPAP framework was converted into a generic set of operational guidelines, and further adapted to suit each city context. The multi-stakeholder (MS) fora included farmers, traders, social groups, researchers, nongovernmental organizations (NGOs), and a range of governmental institutions and policymakers. Facilitation and outcome experiences of the process varied across the two regions and cities. Capacity building of stakeholders to understand and support the MPAP approach appeared to be crucial, but needed time for reflective learning. Lengthy capacity building on the theory of the MPAP approach was less well-received than hands-on learning. At the same time, poor analytical and documentation skills, poor communication facilities and inadequate infrastructure appeared to be an impediment to training and skill development. Rapid turnover of government stakeholders was another challenge to the learning process,

although incentives provided were able to sustain involvement. The leadership role played by governmental institutions was seen as being key for policy advocacy and the dialogue process. When learning objectives and practical innovations were aligned with institutional mandates, support for the MPAP approach was highest. Gender involvement varied across the cities, but facilitation appeared to improve participation over time, especially in the case of India.

Flexibility in process facilitation and implementation supported the achievement of various outcomes: In West Africa, UA was integrated into the national agriculture policy and the revision of city bylaws commenced (Ghana). UA was also included in student curricula in Ghana and Sierra Leone. A 'City Strategic Agenda' on UA was included in the city development plans in Accra (Ghana) and Freetown (Sierra Leone). Statements in support of UA were adopted at the provincial level in Gampaha in the Western Province of Sri Lanka and are currently being considered for the national agriculture policy. In India, activities successfully targeted the Twelfth Five Year Plan. Based on the experience gained, MPAP appears to be a useful programmatic approach to influence institutional decision making, policies and curricula. However, a 'light version' of the approach might be needed to support its wider adoption. Moreover, there are significant regional differences in how best to achieve policy change, which require careful attention in order to achieve the highest returns on investment in the facilitation of impact pathways.

Facilitating Outcomes: Multi-stakeholder Processes for Influencing Policy Change on Urban Agriculture in Selected West African and South Asian Cities

Priyanie Amerasinghe, Olufunke O. Cofie, Theophilus O. Larbi and Pay Drechsel

Introduction

Multi-stakeholder Policy Formulation and Action Planning (MPAP) is a specific approach aimed at influencing or changing policies. It utilizes interactive, transparent and participatory processes involving a variety of stakeholders (Dubbeling and de Zeeuw 2007; Dubbeling et al. 2010). The use of multi-stakeholder processes (MSPs) is known to aid in consensus building through trust and ownership, and has proved to be more sustainable than top-down approaches or short-term activities such as investments in policy briefs or end-of-project policy seminars. Examples of MSPs are local and regional Innovation Platforms and Learning Alliances (FAO 2001; Smits et al. 2007). The fundamental characteristic of these processes is the participatory involvement of stakeholders in the decision-making process in iterative steps that allow for shared learning, collaborative planning and eventual interventions with a likelihood of institutionalization, out-scaling and up-scaling.

This report attempts to compare and contrast the MPAP approach and associated work with MSPs in three African and two Asian cities, which aimed at policy recognition in support of urban agriculture (UA). This objective was based on previous research conducted by the International Water Management Institute (IWMI) and partners, and the observed benefits to UA (Smit and Bailkey 2006; Smit et al. 2001; Tidball and Krasny 2006; Dubbeling et al. 2009; Drechsel et al.

2006; van Veenhuizen and Danso 2007). Another objective was to move UA from its informality to formal recognition, in order to implement safety measures where wastewater is used as a resource (Drechsel et al. 2006; Obuobie et al. 2006). While the MPAP approach followed previous research on UA, it also initiated its own surveys and context-specific research pilots that were carried out, in parallel, in each of the cities studied.

Urban Agriculture

Urban agriculture can be defined in many ways. For the purpose of this report, we simplified the definition of Mougeot (2000) - "Urban agriculture is a practice within or on the fringe of a town, a city or a metropolis, which grows or raises, processes and distributes a diversity of food and non-food products."

In recent years, UA has gained significant attention, due to rapidly growing cities, changing demographics and economies, and associated challenges for urban food security (Drechsel 2008). Smit et al. (2001) estimated that about 800 million people are engaged in urban farming worldwide, supplementing rural agriculture by providing fresh crop and livestock products in the cities, amounting to one-fifth of the world's food production. In West Africa, as in South Asia, urban agriculture takes place

in the front yards and backyards of individual households on large open spaces (not suitable for buildings, under power lines or in between buildings), vacant lands (idle public or private lands) and community assigned areas. The areas that are especially attractive for UA are river banks and inland valleys with adequate water supplies for year-round irrigated farming. In general, the farming systems can be of a subsistence or recreational nature or be market-oriented and highly specialized depending on urban demand and settings. In all cases, UA can provide a variety of livelihood benefits (Mougeot 2000).

Urban agriculture differs from rural agriculture mainly in terms of its limited recognition, close proximity to major markets, frequent tenure insecurity, risk of pollution and the involvement of a much larger multitude of stakeholders (Campilan et al. 2001). A striking difference is that, despite regional variation, policy support for UA is generally limited or sometimes even restrictive (Cofie and Drechsel 2007; Drechsel et al. 2006), although there is an increasing positive recognition catalyzed by a political or economic crisis (Winnebah and Cofie 2007; Drechsel 2008). A key challenge for stimulating UA policy development is the creation of an enabling environment within the urban domain. This concerns a variety of stakeholders. UA, as part of the complex urban system, has more institutional linkages than rural farming. Its multi-functional role and impacts on multiple sectors has been documented (Lovell 2010; Aubrya et al. 2012). Some of the sectors affected by UA, which are frequently cited in literature, are the environment, health, microclimate and climate change, waste management, recreation, sanitation, land use, employment, etc. The possible environmental and health implications of UA are of particular interest to policy acceptance, given the common sanitation and pollution problems faced by cities in low-income countries (Boischio et al. 2006; Cole et al. 2008). This requires close collaboration with the health sector and appropriate interdisciplinary interventions.

UA Development - Stakeholders and Urban Governance

Stakeholders constitute a major element in any MPAP process. Stakeholders are individuals, groups or institutions that are concerned with, or have an interest in, the issue in question. They include all those who affect and/or are affected by the policies, decisions and actions of a system (Warner 2005). The major challenge that is faced with having multiple stakeholders is that they usually have different visions, information and realities which affect their decisions, and hence consensus building is often difficult. This is particularly true for UA, where, in some instances, it is perceived as being beneficial and in others it is seen as a threat to public health due to food safety concerns (Cole et al. 2008; Drechsel et al. 2006). Such situations make dialogue important. Ideally, dialogues which are supported by research to provide supporting facts and data. Evidence shows that such stakeholder dialogues have a high probability of resulting in the joint analysis of issues and co-determination of solutions as well as the actions that need to be taken (Warner 2006; Klerkx et al. 2012). Warner (2005) noted that the MS dialogue processes allow conducive space for mutual understanding and homogenization of the problem to arrive at consensual solutions. Moreover, they provide the opportunity for underrepresented groups, such as women, to be involved, and diverse viewpoints to be integrated into the decision-making process.

In general, any MS process has to be supported by institutional policies and frameworks that will enable the relevant stakeholders and authorities to meet and work together. As urban governance is a dynamic process where competencies and responsibilities are continuously transformed or added to the tasks of local authorities and their partners in urban management (de Zeeuw and Dubbeling 2009), new management tools to support processes of improved urban governance are in constant demand. As a result, a wide range of participatory decision-making tools

and approaches have been developed and practiced to support urban governance (UNCHS (Habitat) 2001). The MPAP approach is one of the options¹ aimed at creating an enabling environment to influence UA policy² revision

or change (Dubbeling and de Zeeuw 2007). This research report presents an analysis of the MPAP approach and its outcomes, after applying it in five cities where the authors were responsible for its initiation or coordination.

Methods

The studies presented here were carried out within the scope of the 'Strengthening urban farmer organizations and their marketing capacities: From seed to table' project (2009-2011), which was coordinated by the RUAF Foundation (www. ruaf.org/node/1970) in 17 cities across the globe. This report focuses on the IWMI-supported subset of these cities, which were three cities in West Africa (Accra [Ghana]; Freetown [Sierra Leone]; and Ibadan [Nigeria]) and two cities in South Asia (Gampaha [Sri Lanka] and Magadi [Karnataka, India]). The cities were part of the preceding 'Cities farming for the future' project (2005-2008) (www.ruaf.org/node/448), and were selected based on stakeholder interest and the ongoing struggle to receive policy recognition for UA.

The City Settings

The **Accra** Metropolitan Area (AMA), with a population of 1.85 million (as recorded in 2010), spreads over an area of about 220 km² (www. ghanadistricts.com). The population growth rate is higher (up to 10% per annum) in its periurban districts than in the official city boundary (3.4%), as the city has outgrown its administrative boundary (GSS 2012). Accra, the capital city of

Ghana, attracts migrants mostly from the northern part of Ghana and from neighboring countries due to its concentration of manufacturing, commerce, business, culture and education, as well as political and administrative functions (Kwadzo et al. 2011). The two major types of urban agriculture in Accra are backyard gardening (in and around homes) and open-space farming, which has been estimated to take place on at least 700 ha (Obuobie et al. 2006). There are different tenure arrangements for the use of the urban open spaces. In general, no farmer owns the land and very few of them pay a fee for using the land. Most of the cultivated open spaces belong to public or private institutions. Cultivators specialized in exotic vegetables use water from drains, streams/rivers, and, if available, pipe-borne water and hand-dug wells. There are many other expressions of urban farming in Accra, including livestock keeping (http://www.ruaf.org/node/498).

Freetown is the capital of Sierra Leone and is inhabited by about 770,000 people, based on the 2004 census (Statistics Sierra Leone 2006). The percentage of urban residents keeps increasing and the city is overcrowded, with nearly 40% of the population unemployed and 60% surviving on less than a dollar a day (http://www.ruaf.org/node/1133). Rapid urbanization

¹ MPAP is only one approach of many. A useful list of references on other MS approaches can be found at http://portals.wi.wur.nl/msp/?page=1256

² 'Policy' is used in this report in a generic way to mean a course of action adopted by a government or an organization to induce certain changes in the decisions and behavior of actors in order to achieve certain goals. It covers all kinds of policy instruments, be it legislative, economic, educative, etc.

in Freetown is attributed, in part, to excessive rural-urban migration as a result of the decadelong civil war that plagued the country. During the war, UA served as the breadbasket for the city, as rebel roadblocks choked transport from the hinterlands to Freetown (Winnebah and Cofie 2007). Freetown receives a significant amount of rainfall (over 3,500 mm per annum), and farmers utilize inland valleys and floodplains, coastal mangrove areas, waste dumps and other open spaces for cultivation (http://www.ruaf.org/node/1133). Urban agriculture is widespread in Freetown and has been identified in all eight administrative zones, but it is more concentrated in the western and eastern parts of the city.

Ibadan is located in the southwestern part of Nigeria (Oyo State) and has a current estimated population of about 5 million. Ibadan metropolitan area covers a total land area of about 3,000 km². of which an area of around 460 km² is considered to be the main city (Agboola and Bloxom 1996). Governance of the metropolitan area falls under five urban and six peri-urban local governing bodies which function relatively independently. Urban farming is typically located in inland valleys (http://www.ruaf.org/node/1517). Given its large size, the study area of the project was restricted to three of the 11 Local Government Areas (LGA). which are located in the center of the city. Over 5,000 urban and peri-urban agriculture (UPA) practitioners were identified in the three selected LGAs. Specifically, about 26% of them are involved in livestock (poultry, goat/sheep, cattle, piggery, aquaculture and dog rearing), 73% in crop (floriculture, vegetable [Amaranthus, Corchorus, Celosia and okra/pepper], fruit [plantain/banana, citrus and pineapple] and arable crops [maize/ cassava]) and 1% in non-traditional farming (snails, mushroom, bee-keeping, herbs, spices, cane rat and sericulture). Most of the farming practices are carried out throughout the year.

Gampaha is a rapidly growing city in the Western Province of Sri Lanka, located in relatively close proximity to the City of Colombo. A decade ago, the landscape of Gampaha was dominated by agriculture. Today, much of the city area is being built up. Rapid urbanization has posed a number of problems, including congestion, increased

garbage and environmental pollution, drainage, and increased food prices due to population increase and fuel price hikes. The official population of Gampaha was estimated at 63,000 in 2001; current estimates point at 300,000. Gampaha is one of the districts with the lowest poverty indicators (8.7% in 2008) so far. It represents an emerging type of Asian city where remnants of rural pockets with traditional farming (especially paddy rice) are in close proximity to built-up areas (http://www.ruaf. org/node/1534). UA development is mentioned in the national policy, but restricted to home gardens and family business gardens, and in support of women in agriculture.

Magadi (Ramanagara District) is located 45 km west of Bangalore, India, and is a satellite town earmarked for rapid development. It is the smallest of the selected study sites with a population of 32,000 in 2011. At present, nearly 45% of the land area is used for agriculture, but the high land prices are forcing agricultural land to be converted into commercial properties. It is similar to Gampaha, where rural farming activities are still part of the cityscape, but urban influence is growing. National policy in India does not specifically refer to urban agriculture. While the MPAP work started at town level, it refocused towards the national agenda to gain wider impact (see section, *Influencing Policy Change*).

Table 1 gives an overview of the population, municipal areas, area under UA, dominant types of UA crops, number of practitioners and existing UA policy support in the five cities.

Table 1 shows that the support for urban farming varied significantly between the cities at the time the project was commenced. In general, the support for UA was poor, with it being more regulated, as in the case of Accra, rather than being promoted. On the other hand, the UA sector appeared to be of a noteworthy size, and the MPAP process was designed to improve the recognition of UA in terms of government services and assistance provided for production. This objective was pursued at different scales. In India and Sri Lanka, for example, the MPAP process was extended to the national level, while, for example, in Ghana, the metropolitan authorities were targeted.

TABLE 1. Comparison of UA characteristics of the study sites.

City, country	Population (millions)	Municipal area (ha)	Area under UA (ha)	Annual rainfall (mm)	Dominant types of urban agriculture	UA practitioners	Existing UA policies prior to MPAP
Accra, Ghana	1.85	23,000	1,740	730	Maize, vegetables, poultry, floriculture, fisheries	1,000	Regulatory bylaws on UA and decentralized metropolitan agriculture directorates
Freetown, Sierra Leone	0.8	8,100	1,000	3,500	Rice, vegetables, poultry, pigs	1,800	No specific policy support
Ibadan, Nigeria	3	10,000*	1,870*	1,300	Tubers, maize, vegetables, livestock	5,000*	No specific policy support
Gampaha, Sri Lanka	0.3	2,790	820	2,400	Paddy rice, coconut, vegetables, flowers	1,500	Home gardens and family business gardens supported by National Agriculture Policy
Magadi, India	0.03	550	240	900	Vegetables, flowers, sericulture, livestock	500	No specific policy support

Sources: Compiled from various project documents posted on www.ruaf.org

Note: * Refers to the study area within Ibadan.

The MPAP Framework and Operational Guidelines

The conceptual framework for the MPAP process (Figure 1), which was developed by the RUAF Foundation, was elaborated in a set of operational guidelines (Dubbeling and de Zeeuw 2007; Dubbeling et al. 2010). Figure 2 shows the generic operational steps that were used to develop the more city-specific action plans, which were need-based and context-specific.

The preparation of training materials (de Zeeuw 2005) and training of IWMI facilitators were carried out by the global RUAF team, resulting in three levels (local, regional and global) of trainers. As shown in Figure 2, the operational steps had multiple pathways, with key aspects being dealt with in parallel (institutionalization, policy dialogue, formation of teams, monitoring and evaluation [M&E], gender mainstreaming and capacity building). A common start across the

cities was marked with the inception workshops and policy seminars, which were aimed at understanding the broad canvas of relevant stakeholders and policy gaps, and needs linked to UA development. The remaining steps were adapted from, and based on, outcomes of the stakeholder dialogues. In each of the cities, the steps were achieved at different timescales. The facilitation process adopted in each country was open and participatory, where all the stakeholders had an opportunity to share their views at the outset and agree on the final outcomes that would help the policy work. The MPAP process had key operational phases, which were balancing research, capacity building and action (Dubbeling and De Zeeuw 2007).

 a) Preparatory activities: Identification of the municipality (or municipal division/department) that will be selected as a focus area for the MPAP process; broad consultations involving

- the full range of local stakeholders; setting up of the program management committee and local MPAP facilitating or core team; coming to a basic agreement between participating institutions and actors on communication strategies and working procedures; and training and preparation of a detailed work plan for the situation analysis.
- b) Situation analysis: Review of secondary data; stakeholder inventory and analysis; mapping of existing agricultural land use; identification and characterization of available open spaces; participatory analysis of the problems and potential of the main urban farming systems; and a critical review of existing policies, norms, regulations and actual policy framework. To some extent, the local and regional economic, political and funding environment will also be analyzed.
- c) Broadening institutional commitment and development of a 'City Strategic Agenda': In this phase, an adequate institutional framework for development of a 'City Strategic Agenda' on urban agriculture is put in place, and such an agenda is being formulated.
- d) Operationalization: This phase includes the participatory design, budgeting and planning of research pilots; and (re-)formulation of norms, bylaws, plans and regulations on urban agriculture, and their integration in institutional programs and budgets.
- e) Implementation, monitoring and adaptation/ innovation: Implementation and monitoring of the process and outcomes, including the obtaining of feedback for process adaptation. This component was crucial to allow learning within and between cities.

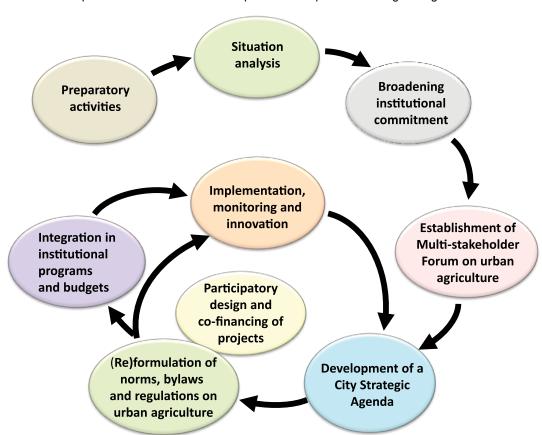
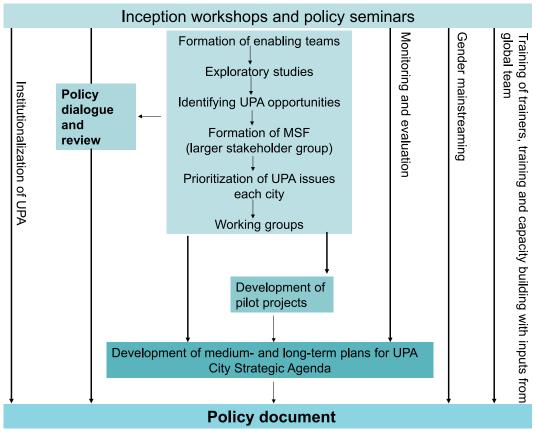


FIGURE 1. The conceptual framework for the MPAP process to improve the recognition given to UA.

Source: Dubbeling and de Zeeuw 2007; Dubbeling et al. 2010.

FIGURE 2. Key operational phases of the MPAP process, with the ultimate aim of developing a city-specific agenda and policy document.



Notes: UPA – Urban and peri-urban agriculture; MSF – Multi-stakeholder forum.

Facilitation of the MPAP Process

The targeted stakeholders included all UA practitioners (in a wide sense), including production and marketing, extension services and policy making, i.e., farmers, traders, community

based organizations (CBOs), private organizations, social groups, government departments, etc. The MPAP process in Anglophone West Africa, South Asia and Southeast Asia was initially facilitated by IWMI with support from other global RUAF partners (Table 2).

TABLE 2. Overview of MPAP initiation, leadership and facilitation in the five cities studied.

City	MPAP (initiator/leadership)	MPAP facilitation
Accra, Ghana	IWMI, Accra, Ghana	IWMI (2-3 years) and then handed over to Ministry of Food and Agriculture (MoFA)
Freetown, Sierra Leone	MAFFS, Sierra Leone	MAFFS, Sierra Leone; and Njala University
Ibadan, Nigeria	JDPC	JDPC
Gampaha, Sri Lanka	IWMI office in Hyderabad, India, and headquarters in Colombo, Sri Lanka; and Western Provincial Council; Leadership was rotated between core members	IWMI (2-3 years) and then handed over to Wayamba University, Sri Lanka
Magadi, India	IWMI office in Hyderabad, India; AME Foundation, Bangalore, India; University of Agricultural Sciences, GKVK Campus, Bangalore, India	IWMI

After project initiation, leadership of each MSF was handed over to a local lead institution by mutual agreement. IWMI continued to facilitate the MPAP process in Accra and Gampaha for a transitional period. The facilitation was eventually transferred to the Accra Metropolitan Assembly (Department of Food and Agriculture) and the Wayamba University (Gampaha). In the other two West African cities, Freetown and Ibadan, the

Ministry of Agriculture, Forestry and Food Security (MAFFS) and the NGO, Justice Development and Peace Commission (JDPC), respectively, accepted responsibility of the process from the beginning. In Magadi, the coordination was first handled by IWMI, then the AME Foundation and, eventually, by the University of Agricultural Sciences, Gandhi Krishi Vignana Kendra (GKVK) Campus, Bangalore (Table 2).

Results

The Preparatory Phase

The preparatory phase marked the start of the MPAP process in all the cities. A generic set of training materials was adapted to suit the different cities, taking into account the city settings, local language, administrative regulations, etc. At the global level, the regional trainers met once a year to share ongoing experiences, which were fed back into the training process. Building the local MPAP teams and finding 'champions' within the partner institutions were important steps in the initial process in all the cities. Their insights into the systems that operate within cities, such as possible pathways for UPA adoption or strengthening and processes of institutionalization, were as vital as they were diverse and challenging, though some commonalities were also present. For instance, relevant departments were identified in all the cities where UA played a role, but there was no systematic approach to address specific needs. Another commonality was that policy support was generally limited to rural agriculture.

Stakeholders, Facilitation and Mobilization

From the inception workshops held in the cities, it became clear that, while MS presence is vital to capture the multiple needs of UA, the

leadership had to be borne by stakeholders that could address broader policy issues and succeed in effective action planning. Therefore, to a certain extent, the approach taken in stakeholder leadership selection was purposive, as the ultimate target was to bring about policy change/revision. To proceed, IWMI initiated the dialogue with the relevant governmental departments, who provide extension services and have the power to influence policy in the country. With their support, other stakeholders, such as institutions, organized groups or individuals, were invited to participate.

To identify key stakeholders, in the example of Accra, the IWMI-RUAF team (which was already based in the city) started with the collection of available information from government agencies, websites, project reports, etc., and further information was obtained from formal and informal contacts, which were all fed into the stakeholder analysis. This process was modified for Freetown and Ibadan, where the exploratory stakeholder analysis was carried out by a trained local facilitator who helped to constitute the local teams.

Stakeholder identification in Gampaha, Sri Lanka, was relatively easy, as home-based farming was already recognized as being an important area for development. IWMI facilitators found that the government organizations were well connected to local practitioners, traders, NGOs and other social groups. Therefore, formation of a stakeholder forum was not difficult. Farmers were happy that the leadership was with the government, as this would ensure the recognition of their needs and delivery of inputs and extension services. In the first year, the Mayor of Gampaha and the heads of various relevant departments agreed on a team that was to be called 'Nagarika Haritha Balakaya' (Urban Green Force). The team which envisioned a common goal of having a clean and green city, became the core unit of the MSF, who sought the support of other stakeholders (farmers, traders and social groups). Later, the Wayamba University took over the facilitating role from IWMI.

In Magadi, the facilitating body (University of Agricultural Sciences, Bangalore) found that the leadership role had to be with the Chief Officer of the Municipality, as agricultural matters within city limits had to be done with the concurrence of the municipal authorities and the department of agriculture. We learned that any government sector wishing to get involved in activities related

to non-governmental programs had to seek prior clearance from the district-level authorities.

Thus, a first lesson was that a good understanding of the vertical tiers (country/state/provincial/municipality) and horizontal entities (institutions) was important for governance issues. It also became obvious that for the continued involvement of governmental institutions in the dialogue process, not only was their official permission to work on the project needed but competitive incentives, such as remuneration or honorarium, and training opportunities were also necessary. This was observed across the cities.

Once the representatives of the stakeholder groups were selected, they were clustered into distinct categories (strategic, boundary and policy partners) based on their level of involvement, as illustrated in the Gampaha case (Figure 3). The strategic partners were those who were most important to work with UA practitioners on the ground. The boundary partners would be those who are supportive and useful in a limited capacity.

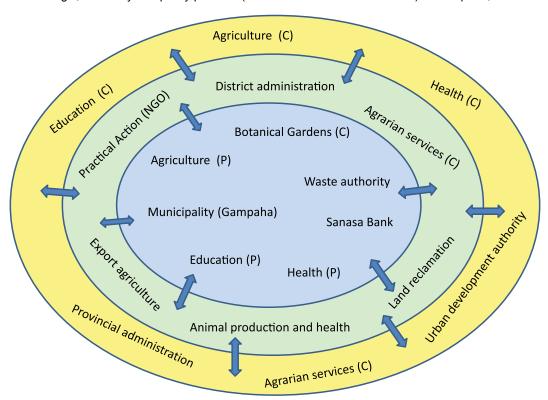


FIGURE 3. Strategic, boundary and policy partners (from the inner to the outer circle) in Gampaha, Sri Lanka.

Note: P = Provincial government; C = Central government.

The final established MS enabling teams were: (a) Bangalore, India (coordinating on behalf of Magadi): 'Urban Horticulture and Peri-urban Agriculture Forum'; (b) Accra, Ghana: 'Working Group on Urban and Peri-urban Agriculture' (AWGUPA) (Box 1); (c) Freetown, Sierra Leone: 'Freetown Urban and Peri-urban Agriculture Project' (FUPAP); (d) Ibadan, Nigeria: 'Ibadan Forum for Urban and Peri-urban Agriculture' (IFUPA); and (e) Gampaha, Sri Lanka: 'Urban Green Force'.

The MPAP Activities

The exploratory surveys, formulation of strategic actions and implementation of pilot projects were the most substantive and longest part of the MS process. Once again, common as well as individual approaches were used to suit the local differences

and to apply the first lessons learned from the field. The common approaches were awareness creation and mobilization of UA stakeholders for a shared vision on UA and consensus on joint ownership of the MPAP process, and the exploratory surveys (situation analysis) on the state of UA in each city. The city surveys included an inventory of UA farming systems, review of current policies, policy framework, land-use mapping and UA stakeholder analysis. The results were synthesized in a Policy Narrative. This final phase aimed at broadening institutional commitment through the establishment of a multi-stakeholder forum (MSF) and the formulation of a City Strategic Agenda (CSA) based on the policy narrative. Once the relevant background information was collected, all cities were supposed to engage in formulating specific UA **pilot projects** to address research questions that were relevant for policy making on topics of

Box 1. Example of members of a city Working Group (Accra: AWGUPA).

- Department of Food and Agriculture (AMA)
- Planning Coordinating Unit (AMA)
- Public Health Department (AMA)
- Town and Country Planning Department (AMA)
- · Department of Parks and Gardens (AMA)
- Department of Cooperatives (AMA)
- University of Ghana: College of Agriculture and Consumer Sciences, Department of Geography and Resource Development
- Council for Scientific and Industrial Research (CSIR): Science and Technology Policy Research Institute (STEPRI); Water Research Institute (WRI)
- · International Water Management Institute (IWMI), Ghana
- · Environmental Protection Agency, Ghana
- · Directorate of Agricultural Extension Services, MoFA, Ghana
- EnterpriseWorks, Ghana (NGO)
- · General Agricultural Workers' Union
- Dzorwulu Vegetable Farmers Cooperative Society
- · La Livestock Farmers Association
- Ecumenical Association for Sustainable Agriculture and Rural Development (NGO)
- Heifer International, Ghana (NGO)
- ActionAid, Ghana (NGO)

local interest, the revision or formulation of UA regulatory measures (norms, bylaws, etc.), and integration of UA into their respective institutional programs.

Some differences in the processes were also seen, such as the timeline. The timeline varied between cities based on a variety of factors, such as institutional priorities or process of facilitation. In Ibadan, for example, the UA pilot project was implemented through working groups (task forces) constituted from the local enabling team. The task forces were responsible for networking and coordination, advocacy, pilot project development and capacity development as well as information management. Each task force consisted of four members who were selected by the larger team in line with individual capabilities and institutional positioning. This approach combined the advantages of allowing all stakeholders to be involved while avoiding the disadvantage of depending on a larger group for every step towards pilot project implementation. The feedback from Ibadan reflected positively on stakeholder participation, ownership, accountability and joint learning.

In Accra and Freetown, on the other hand, implementation of the pilot projects was coordinated by only one stakeholder in each city, STEPRI in Ghana and the Freetown City Council (FCC) in Sierra Leone. This approach was less participatory and affected overall commitment while taking surprisingly more time for implementation than with more partner involvement in the other cities.

In Accra, the MPAP process made use of results from previous and ongoing research, for example, on safe wastewater use for urban agriculture to inform policymakers.

In Gampaha, the development of the overall project was done collectively by the MSF and supported by the IWMI facilitators. In the first year, the leadership was with the municipality and technical support was provided by the Department of Agriculture. All other stakeholders played a supporting role in monitoring and data collection, where relevant. As a result, institutionalization of UA activities across institutions was smooth. In Magadi, India, the MPAP coordination was carried

out by the AME Foundation at the initiation stage and was later taken over by the University of Agricultural Sciences, GKVK Campus, Bangalore, India. At the outset, a Regional Advisory Committee was appointed to critically review the MPAP process with cross-city experiences and link these with the global perspectives. Thereafter, the action planning was taken over by the MSF in both South Asian cities.

The process of M&E was multifaceted, involved process monitoring (the IDRC-supported approach of 'outcome mapping'), and specific indicator-related impact monitoring and evaluation. All cities adopted these three mechanisms and stakeholders of the MSF were inherently part of the process.

Seeking Stakeholder Commitment

Stakeholder collaboration, commitment and consensus building was achieved through a participatory process. Formalized agreement to work together through carefully structured action plans resulted in amiable outcomes in all the cities. Opportunities to also express individual ideas stimulated concrete results, and had a good buy-in from the stakeholders. In Accra, as in the two south Asian cities, a MS agreement with the terms of reference was signed by all participating stakeholders to formalize the consultations, thereby committing them to an agreed agenda. However, compliance was, in part, jeopardized, for example, due to staff turnover (Ghana) or conflicts with government directives (India). Rapid turnover of staff who were in the program also meant that training, capacity building, advocacy and other activities of the MPAP process had to be repeated.

In Gampaha, the agreements were fulfilled at the highest level of the provincial government, because of the strong leadership from the Municipality and Department of Agriculture. In Ibadan and Freetown, the lead institutions started their work later than in Accra, and could hence learn and adjust the process such as working through task forces. This adjustment is an example of the flexibility required by the MS processes, which was supported in this case by the piloting of MPAP in Accra.

Capacity Building of MSF Teams

The training methodologies differed in the selected cities. In Accra and Gampaha, the capacities were developed through training on pre-determined topics (MPAP theory and practice) as well as on topics identified during a training and learning needs assessment. These topics were aggregated into six to seven training modules: Concepts, forms of UA and linkages to other sectors; MPAP, MSF and policy influencing; development of pilot project in UA; M&E; gender mainstreaming; and knowledge and information management. In each module, relevant topics were addressed in about three to four training sessions of 1.5 hours each.

The training was conducted over a period of 7-10+ days in a retreat, in order to get the participants away from their work schedules. One

of the lessons learned was that the concentration and focus of participants tended to shift after the first few days and effective learning declined afterwards. To emphasize the basic principle of adult learning, with greater emphasis on 'reflective learning', the training in Freetown and Ibadan was conducted in two parts, each consisting of 5 days over a period of 3 months. This allowed for alternate learning and application, and facilitated immediate positive outcomes (see Box 2). In India, the training was reduced to 4 days based on the experience in Sri Lanka, and also because the officers could not be away from their offices for too long.

Study visits were seen as enriching by the participants, as they were able to observe, share and learn. Members of the teams in Accra, Gampaha and Magadi were exposed to innovative methods for UA (e.g., low-space

Box 2. Learning outcomes of trainees in the MPAP process in Freetown, Sierra Leone.

The following information was gathered after 6 months of training during monitoring and evaluation:

Ministry of Agriculture, Forestry and Food Security (MAFFS)

- Responsiveness of policymakers, including the Hon. Minister, Director General and other Directors towards mainstreaming of UA into the ministry's next medium-term plan, with a special focus on promoting UA as a food security and poverty reduction mechanism. This followed the facilitation carried out by trained personnel.
- MPAP is now also being applied by the Planning, Evaluation, Monitoring and Statistics Division of MAFFS.

National Commission for Environment and Forestry

- Establishment of new linkages with government departments, NGOs and the Freetown City Council as partners in environmental management and natural resource use.
- Agreement to develop projects and programs using the MPAP approach.

Freetown City Council (FCC):

- Selection of a trainee resource person to draw up an action plan for its M&E unit.
- Promotion of UA in the FCC, including the distribution of seeds and fruits to urban farmers.

Farmers and Farmers Associations:

- Increased collaboration between farmers and other stakeholders who are willing to lobby, e.g., to obtain farming inputs.

Njala University:

- Incorporation of UA and MPAP aspects in the agriculture curriculum of the university.
- Development of student projects on UA.
- Distribution of knowledge materials on UA.

technologies, water-saving methods and the safe use of wastewater), which were duplicated in their own settings. In West Africa, these visits went beyond the study cities. In South Asia, the teams from India and Sri Lanka also met at common venues in the respective countries to share their experiences.

Institutionalizing the MPAP Approach and UA

Institutionalizing the MPAP approach and UA was a long-term process, where an attempt was made to incorporate the MPAP process into the procedures, ideas and practices of local stakeholders and institutions to become part of the institutional routine. Where UA was not yet an important part of the institutional agenda, the local teams used various methods to facilitate the institutionalization of UA, which required continuous facilitation.

In Accra, the process of consolidation and up-scaling was championed by IWMI's coordinating staff through personal office visits, seminars, meetings and workshops organized in collaboration with the Institute of Local Government Studies. In Gampaha, programs run by the Agriculture Department were already supporting home gardens and family business gardens as UA activities. The MPAP approach allowed other stakeholders such as departments involved in waste recycling to join in and maximize the resources for UA within the city.

In Freetown and Ibadan, task forces were formed for advocacy and lobbying among policymakers, donors and potential partners for the consolidation and up-scaling of the MPAP approach and UA in partner institutions. This was supported by regular radio messages and newspaper publications to create awareness, raise interest and seek continuous commitment. In Magadi, the stakeholder administrative systems appeared to be more rigid and set according to a mandate, and any innovative approach needed sanctioning at the very high levels. Therefore, the institutionalization process was slow and incremental at the outset compared to the other cities.

The City Strategic Agenda

The action planning culminated in the preparation of a 'City Strategic Agenda' (CSA), which included a short- to long-term plan for UA activities in the respective city. The CSA, thus, facilitated the transition of the issues and strategies identified at the forum into the respective city development agenda, with concrete action plans and projects on UA. Each CSA used the logical framework approach and defined the necessary activities, targets and indicators, together with the responsible actors and their required commitment of resources, within a time frame for implementation along with a monitoring system for overseeing the process (IWMI-RUAF 2008a, 2008b, 2008c, 2008d, 2008e). The time frames were designated as short-term, medium-term and long-term with the respective output goals. Two approaches were employed to implement the CSA: (1) Pilot projects were developed from the most highly prioritized actions and then implemented by the team using the RUAF project seed funding; and (2) Specific activities were integrated into the institutional framework of the individual stakeholders, thereby institutionalizing the UA link.

One of the main learning experiences for the stakeholders was working together towards a new common goal, which meant that, in some cases, institutional barriers had to be shed. Citywide experiences showed that institutions realized their relative roles in promoting UA, and that multi-stakeholders were required to successfully implement UA programs. In this sense, the institutional horizon of each stakeholder was broadened and created opportunities for interinstitutional collaboration (Cofie et al. 2010; Larbi and Cofie 2010; Amerasinghe 2010).

Influencing Policy Change

No specific UA policies existed in the cities of Freetown, Ibadan and Magadi (Table 1) while some UA regulatory and restrictive directives were already integrated into the city bylaws of Accra (Box 2). For Gampaha, Sri Lanka, the National Agriculture Policy had a statement on UA which supported

home gardens and livelihoods for women. The approach for influencing current policies included the identification of changed targets (development outcomes) and the best ways to achieve them (Table 3). In Accra, Freetown and Gampaha, the opportunity to influence change presented itself at both the local and national levels while in Ibadan and Magadi, it was at the state level.

Significant achievements were made in several cities, which can be directly attributed to the project. Changes beyond city level were, in part, facilitated by components of the MPAP framework, such as policy seminars, or involved project staff (lobbying) and can be considered as spill-overs of the MS approach, but not as a result of the particular MPAP process per se.

As shown in Tables 3 and 4, the results varied significantly: In Ghana, for example, UA was integrated into the national agricultural policy of the Ministry of Food and Agriculture's Food and

Agriculture Sector Development Policy (FASDEP II); became an award category (Best urban and periurban farmer) within the annual national farmers' day celebration; was taken up to eventually amend Accra's bylaws on agriculture (Box 3); and became part of the undergraduate and postgraduate agriculture degree programs at the College of Agriculture and Consumer Sciences, University of Ghana; School of Agriculture, University of Cape Coast; and College of Architecture and Planning, Kwame Nkrumah University of Science and Technology (KNUST).3 In Freetown, UA was acknowledged in the Draft Agricultural Sector Policy, the Urban Development Plan of the Freetown City Council and in the curricula of the Njala University College. In Ibadan, UA was integrated into the planning and budgeting for key stakeholders within the Akinyele Local Government, JDPC, and the Ministry of Environment and Water Resources, Oyo State, Ibadan.

TABLE 3. Influencing policy changes on UA in West Africa and South Asia.

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	Identified development outcomes	Strategies employed for change
Accra	Revision in UA bylaws in AMA; Integration of CSA into medium-term development plans; Integration of UA into food and agriculture sector development policy	Meetings with the Deputy Minister of Food and Agriculture; Advocacy by consultants and university dons; Stakeholder workshops, policy seminars and writing of position papers; link to research-oriented projects for supporting data
Freetown	Integration of UPA into national agriculture policy; Integration of UA into the Freetown City Council Urban Development Plan; Creation of land banks for UA; UA included in curricula of Njala University	Policy seminar; technical input into drafting national poverty reduction policy; advocacy and lobbying MAFFS
Ibadan	Posting of agricultural extension staff in urban areas; Inclusion of UA into plans of Akinyele Local Government, National Horticultural Research Institute, and Justice Development and Peace Commission	Policy seminars, meetings with ministry and local government officials; gathering farmer testimonies
Gampaha	Revise the UA policy statements Institutionalize UA in relevant institutions Adoption of medium- and long-term plans in a strategy document with joint ownership	Strategic meetings with key officials in the provincial administration and Ministry of Agriculture (Minister); Collection of evidence base by the stakeholders and preparation of a strategic plan for UA (City Strategic Agenda)
Magadi	Contribute to the agriculture implementation plan of the state, and develop policy statements to be presented to the central government	Series of strategic meetings with key officials at the state- level administration and the central government (planning commission)
	Institutionalize UA in key institutions	Provide evidence base from global and local experiences

³ One of the activities of the regional RUAF focal point was to train a core team of trainers, who could serve as resource persons for any UA training activity in the region. In particular, representatives from the different universities were part of this, which also resulted in the acknowledgement of UA in the respective curricula.

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Accra	Freetown	Ibadan	Gampaha	Magadi
AWGUPA, the multi-stakeholder platform on UA established in 2005, has been engaging in policy dialogues, joint decision making, and planning and implementation of UA activities.	FUPAP was established in 2006. Engaged in vibrant policy dialogues, and development and implementation of project proposals.	IFUPA was established in 2007. Engaging in vibrant advocacy and lobbying for UA development and seeking financial support for UA. CSA on UA developed and	Functional MSF named 'Urban Green Force' was formed in 2007, comprising of eight stakeholder institutions. A CSA formulated for the period 2008-2012. New UPA activities	Creation of a functional MSF named Urban Horticulture and Peri-urban Agriculture Forum' in 2008, which actively supported UPA activities and waste recycling for compost making. A CSA was formulated for the period
The CSA on UA is developed and integrated into the AMA's Medium Term Development Plan, 2008-2010. UPA is fully integrated into the national agricultural policy of the Ministry of Food and Agriculture's FASDEP II. The annual 'Best farmer' award system includes a new category for the 'Best Urban and Peri-urban Farmer' since 2006. Revision of AMA bylaws using a participatory approach. Revised bylaws are awaiting final adoption at the AMA. Inclusion of UPA into agricultural courses and graduate research	implemented by one of the stakeholder institutions through a support grant from the European Union (EU). UA was integrated into the draft Urban Development Plan of FCC. UPA was included in the draft Agricultural Sector Policy of Sierra Leone (2007). UPA is included in the curricula of the Njala University College. More consultative participation in research and extension with farmers. Two farmers' service centers were established to provide training, extension and information to urban farmers.	contents integrated into the plans of several member institutions from research to NGO, local government and Oyo State ministry. Extension officers were recruited for urban lbadan. Farmers' support mainstreamed into the Research-Extension-Farmer-Input Linkage System (REFILS). Field schools supported women farmer groups in five communities (with over a 100 women growing vegetables).	included in the institutional plans of stakeholders. Policy statements for the national agriculture policy have been drafted and discussed at provincial level. Workshops are being held at national level to obtain consensus on UPA policy issues. Making contributions to the national campaign on food security, and offering training on UPA to youth, women and school programs. Strong linkages established between NGOs, universities and research organizations, allowing farmers to benefit from training	2009-2013. UPA was supported through the Horticulture Department, which was not the case before. Special subsidy programs were offered to farmers practicing UPA. The Magadi MSF is now actively participating in the National Consultation on UPA. The case for promoting UPA has been presented to the national Planning Commission. Farmers have developed a good rapport with the departments of agriculture and horticulture, and the university extension systems. Municipality services have been extended more than before.
at three national universities; and farmer-research-extension interface has been strengthened.			opportunities.	

Box 3. Revising Accra's bylaws on urban agriculture.

Why a revision appeared appropriate?

- Accra's bylaws on agriculture are not supportive of the practice of UA, but was designed to restrict it.
- > To include safety measures for the human consumption of urban agriculture products.
- To create an enabling environment for practitioners of UA.

How was change facilitated?

It involved the following stages:

- A consultative meeting with the Accra Metropolitan Assembly (AMA) resulting in an agreement
 of the need for a revision of the bylaw to include a wider variety of production systems and value
 chains (on the cultivation and sale of crops, public markets, slaughterhouses/slabs, stray animals,
 and control of swine, cattle, sheep and goats, etc.).
- 2. **A stakeholder workshop for practitioners.** A consultation with practitioners (farmers, traders, butchers, etc.) to inform them of the revision of bylaws related to their activities and receive suggestions for appropriate amendments.
- A stakeholder workshop for technical staff. An assessment of technical needs for UA practitioners and fine-tuning the bylaws with the support of technical officers in the government ministries, departments and agencies, research organizations and NGOs.
- 4. A policymaker's forum. Submission of suggestions for revised bylaws to the representatives of the AMA, in order to assess the legal implications of the revision and the appropriate revision to be made. Agreement on the final draft and presentation to the Agriculture Sub-committee of AMA for further debate and adoption.

Results

- · A set of revised agriculture bylaws suggested to AMA.
- Supporting guidelines (for policymakers, practitioners and technical staff) for the enhancement of UA in Accra.
- Empowered urban practitioners.
- Enhanced participation of the main stakeholders on governance-related issues.
- At the time of publishing this report, the revision of bylaws was not yet affected, as the process slowed down with the end of process facilitation. It is expected that the process will continue within a larger bylaw revision, but it is hard to predict as to how quickly this will happen.

Lessons learned

- The policy revision process is labor-intensive and time consuming (acquisition of information and comprehension of legal standing of bylaws by stakeholders, funds are required for meetings and preparation of the bylaws).
- Involvement of the stakeholders in the exercise led to a greater understanding and the inclusion of a wide range of issues surrounding UA.
- Inclusion of a wide body of stakeholders (with multiple specialities) allowed a broader analysis of the bylaws.

Contributing factors

- Presence of a lead institution with the motivation and drive to facilitate the process of policy influencing.
- The willingness of stakeholders to see a change.
- Effective capacity building of stakeholders.
- · Availability of funds through the RUAF program.

In Gampaha, Sri Lanka, the policy review process showed that the existing National Agriculture Policy did not adequately describe the farming varieties that can be developed under UA. Therefore, the stakeholders suggested more elaborate UA policy statements. The Western Provincial Council incorporated a new agenda on urban agriculture into its agriculture implementation plan. The Council also initiated a roundtable discussion with other provinces which resulted in the endorsement of a set of recommendations on urban agriculture by the Minister of Agriculture, who directed his ministry to correspondingly amend the national agriculture policy (IWMI 2013). Another outcome was observed in the university curricula of the Wayamba University, which commenced a UA module for their undergraduate students and actively engaged their master's students on projects linked to UA.

In India, the agriculture policy did not distinguish between urban and rural agriculture, and urban agriculture did not have a special mention in policy documents either. Since policy implementation is executed at the state level, but policy formulation is at central government level, a series of information sharing and lobbying activities from the pilot city to the regional and national levels were needed to facilitate a change in support of UA in India. This required a very different approach, with more time needed to attend meetings at national level to promote UA. An important step was the national RUAF coordinator (at IWMI) being recognized as a resource person for relevant committees advising the governmental Planning Commission. Entry points were the due recognition that urban agriculture can be considered under the existing national agriculture policy, and under specific topics such as 'urban horticulture' and 'women in agriculture'. As the recognition of UA was also supported by other initiatives, including some launched by the central government, such as the support of peri-urban clusters to produce perishable vegetables for the cities, the policy recognition of UA certainly has many more 'parents' than RUAF.

The variety of outcomes presented in Table 4 shows that a project operating within a particular time window has to be flexible to address the opportunities that arise within the same window, or if the project is supported by a program with continuous funding also within that same window. In any case, the opportunity for (policy) change varied significantly between the cities, showing that related processes, such as MPAP, or any of its components, must be prepared to suit a city's national context and the administrative set up and timing of policy revision or policy making.

Challenges

Multiple challenges were noted in implementing the MPAP framework across the cities (Table 5), some of which were in selected cities and others in all the cities. Rapid turnover of staff in the government institutions were common across the cities, and this delayed the process beyond the expected time. The level of competency of the representatives was not always fitting, which also delayed the learning and training process. Documentation (e.g., for M&E) proved to be a heavy burden for several partners, many of whom were practitioners on the ground. Also, some tasks, such as identification of the initial policy gap, took much longer than anticipated and was a result of starting the MS consultation process. Throughout the MPAP process, a strong leadership was required to piece the different activities together, which was also due to the large variation in competencies and interests of the stakeholders.

Besides the challenges noted in implementing the MPAP process, reflective learning was also needed during facilitation and coordination of the process (Table 6). Low commitment of some members of the MSF coupled with the lengthy process of MPAP implementation affected the attention span and placed a burden on the facilitating and coordinating institutions. Some suggestions to improve the process and coordination are stated in Table 6.

TABLE 5. Challenges noted in implementing the MPAP framework, the consequences and suggestions for addressing the challenges.

Challenges experienced	Consequences	Suggestions to address the challenges
Turnover of staff involved through re-assignment within their institution, retirement, etc., or as expected tangible benefits did not crystallize (all cities)	 Loss of institutional memory and commitment Repeating MPAP training resulting in time loss Particular processes assigned to certain institutions got delayed 	 Program has to be more tailored to suit the interests of partner institutions, for example, through analysis of annual work plans to identify linkages and win-win situations or leverage for partners. Set up clear terms of reference (ToR) on profile and dedication of designated project staff. Process can work through inter-institutional working groups and task forces to reduce dependency on individual institutions.
Staff assigned to the project by partner institutions are not a good fit (some cases in all the cities)	Limited personal interestLimited expertise to contribute	Partners should determine their own representatives. This can be steered within limits through a memorandum of understanding (MoU) with the partners, which has clear ToR covering the expertise and responsibilities of representatives.
Main workload remained with the RUAF focal point (all cities)	Reduced prospects of project sustainability	 Delegation of workload to partners or working groups. Placement of staff in partner institutions to build their in-house capacity and to understand their constraints.
No formal approval from the state government (India)	 Commitment ends with project or is delayed awaiting endorsement 	 Decision structures have to be analyzed in advance to involve crucial stakeholders from the start, for project sustainability and to target the right level of change.
Centralized project work plan and commencing all projects at the same time (all cities)	 Does not work as each city does things at its own speed Similar problems encountered in different cities without learning 	 Feedback mechanism should be strengthened to increase flexibility in global milestones and deadlines. Roll-out individual components of the framework in one city first and then in others to allow for learning and adjustment.
MPAP training was too long and theoretical (all cities)	Participants lost interest	 Train people in blocks with sufficiently long breaks in between. Tailor training sessions to the minimum time needed including examples from local application of the process.
Project tasks or pilot projects carried out by one stakeholder	Implementation might be delayed Declining interest by others	 Implementation through a joint task force allows for shared ownership and might also speed-up the process (but it can also delay).
Bylaw revision process needed time beyond what the project could support	Revision process slowed down or stalled with the end of the project	 Urban bylaws are only revised periodically, and any initiative in-between must be prepared for a long process to influence the systems (programmatic approach).
Underrepresentation of particular stakeholder groups (all cities)	Project is missing its goal of inclusiveness, affecting its decision making	Take more time to select appropriate partners and build a trusted relationship, especially for the poor and marginalized.
MS consultations and decision making are time consuming (all cities)	Project progress slows down	MS processes require good coordination, flexibility and patience. Each project needs well-experienced facilitators and buffer time.

TABLE 6. Examples of facilitation and coordination challenges associated with institutions of the MSF and options to address them through internal or external capacity building.

Facilitation/coordination challenge	Capacity building needs/other measures
Low commitment of individuals of the MSF	Visioning exercise; team building; incentive analysis; M&E (also of individual representatives)
Project is of low or medium priority for institutions of the MSF	Participatory project development showing the role of UA aligned to the current priorities of partners
High demand for M&E and documentation constrained by limited relevant skills of partners	Training on M&E applied to needs of partners, and in basic reporting skills

(Continued)

TABLE 6. Examples of facilitation and coordination challenges associated with institutions of the MSF and options to address them through internal or external capacity building (Continued).

Facilitation/coordination challenge	Capacity building needs/other measures
Cumbersome bureaucracy, limited infrastructure and poor communication facilities of local institutions	Team building to open informal communication channels (e.g., short messaging service [SMS], social media); the use of seed funding to (re)build and maintain a minimal operational capacity
Trust to be developed	Hosting staff of partner or seconding coordinator to partner institution; team building
High workload of coordination team	Delegation and partner empowerment (including budget); time management

Discussion

As with all participatory processes, the MPAP approach lent itself to flexibility, learning by sharing and adaptation, with the help of the training materials which were prepared for adult learning. While some common principles were applied to all cities, a specific 'menu' and appropriate 'recipe' had to be worked out for each city. Hence, the MPAP approach evolved gradually in Accra, Freetown, lbadan, Gampaha and Magadi over a period of a few years. Common principles that were applicable to all the five cities include the following:

- Identification of tiers of governance (vertical and horizontal) to understand the stakeholder interactions.
- Participation and engagement of stakeholders at all levels of governance to make the process transparent and to empower stakeholders in managing the activity process.
- A people-centered approach allowing ownership of decisions and creating the impetus for increased chances of successful implementation. An example is the involvement of all categories of stakeholders, including farmers, in the bylaw revision process in Accra and developing policy statements in Gampaha.
- Social learning, in groups, with emphasis on the experiential learning cycle.
- Inclusiveness of all views to increase the legitimacy and credibility of the process.
- Partnership and cooperative management, which involved developing and strengthening

networks between the stakeholders, and creating feedback loops between local and state or national levels into the decision-making and policy formulation process.

The city experiences showed that once the process was initiated, facilitation and ownership was vested in diverse departments in the different countries; a result that was achieved through continuous dialogue on the needs and realities on the ground. In some cases, a 'core team' comprising a few stakeholders underwent training, took on the initial responsibilities and worked closely with the facilitators (Accra). In others, the entire MSF leadership was rotated, so that the responsibilities were divided to reduce possible pressure (Gampaha). Having the heads of institutions in a MS forum at a tier above the working group hastened the decision-making process.

Application of the MS approach to facilitate the development of policy support for urban and peri-urban agriculture in the five cities, provided insights into the multifaceted policy climate in the two regions. The process documentation allowed to capture a plethora of information for replication and up-scaling. The key challenges faced and related lessons learned are summarized below:

Inclusiveness

The selection of partner institutions and appropriate individuals is very critical to the success of implementing the MPAP framework, as also confirmed by Dubbeling and de

Zeeuw (2007) and Dubbeling et al. (2010). The issues addressed need to be pertinent to the stakeholders, which implies that selecting stakeholders, and understanding their needs and positions relative to UA, is very important (Drechsel et al. 2008). At the outset, it was clear that selection of the relevant institutions with a set of committed representatives complemented by a good institutional governance structure was pivotal for the process. However, the selection of institutional representatives to the MSF is often difficult to influence, as institutions have specialists that they have identified. Whether or not these persons have enough time or are suited to be in a team such as a MSF is only learned as the interactions commence and ideas are exchanged. In the case of Freetown, where the decentralization process was still in its infancy, city teams were constituted with several representatives from the national level who had a more regional interest. This was not the same as having someone who was knowledgeable about the contextual city matters. Also, partner institutions and their individual participants were expected to be open to critical reflection and learning about their own practices, and also needed to be committed and highly motivated to be part of the MPAP process. However, the turnover of participants had significant negative impacts on the learning process and in maintaining an institutional memory. For instance, representatives of key institutions left the forum through transfers, promotion or retirement, which impeded activities and slowed the process. Others might have left due to increasing disinterest in the activities.

Another challenge was finding ways and means to identify and involve vulnerable and marginalized groups in the community work, especially those representing the poor and women. In many cities, there are many vulnerable groups, but they are poorly organized and, therefore, easily missed (Dubbeling and Merzthal 2006). In the MPAP process, the poverty levels, especially of farmer representatives, were known only to the lead organizations, i.e., not singled out, but included with equal rights in the larger MS group.

In the south Asian region, gender participation varied strongly. The participation of women in all stakeholder groups was high in Gampaha (65%), but was initially low in Magadi (3%). However, women's participation improved in Magadi (increasing to 33%), after targeted, culturally appropriate sensitization and awareness programs. These programs were carried out with the support of the men and, today, women are working closely with men in groups across different tasks and programs. This was a remarkable success for the gender program of RUAF. However, in general, such processes are slow and will achieve good results only if the facilitation is sustained until trust and confidence is built. It is not a one-time action.

Involvement of CBOs in the UA dialogue process was surprisingly low in both Sri Lanka and India. The exploratory study indicated that only a few CBOs were involved in UA, but perhaps a greater effort in identifying such groups may have had positive outcomes. It is hoped that the recent efforts to boost the vegetable production in peri-urban India will see the birth of new participants in the UA landscape in India (MoA 2011).

Capacity Building and Training

Partner and stakeholder participation in the process varied along the implementation pathway of the program. Highly skilled facilitation was required to understand the individual needs for capacity building of different stakeholders and to also motivate for enhanced participation. Overall, participation improved with training, which was most visible in the south Asian countries, while, for example, in Ghana, we saw increasing fatigue. While the training attempted to improve skills and knowledge, in some instances it also created a momentum towards scaling-up or mainstreaming the process in partner institutions. Proposal writing, and process monitoring and documentation (via outcome mapping), were key areas that needed the most time in terms of facilitation. It became clear that 'light versions' of some tools, such as outcome mapping, or MPAP itself, could have a higher chance of adoption

than the original, unless adequate time can be allocated by participants for the exercise and by facilitators for skill building and follow-up.

Process Facilitation and Coordination

Process facilitation and coordination were crucial components of the framework and required full-time staff on the job. The process was time consuming and needed broad consensus, which required team facilitation skills, negotiation and lobbying skills, as well as a high degree of diplomacy. All these are not the standard skills we can expect in a research organization, such as IWMI, and thus resulted in a steep learning curve for those involved. In this regard, it was easier for other RUAF focal points, such as those who were active in policy dialogue and capacity building (e.g., Institut Africain de Gestion Urbaine [IAGU] [African Institute for Urban Management] and the Municipal Development Partnership for Eastern and Southern Africa [MDP]).

Besides coordination, sustaining stakeholder interest and buy-in was supported by the endorsement of the project through higher authorities and/or the identification of a local 'champion'. In Sri Lanka, for example, a key official in the agriculture sector responded to a (unrelated) government call on attaining food security at the household level, and realized the opportunity offered by the MPAP process for its administration (Amerasinghe et al. 2011). This well-respected official became a 'champion' throughout the process, creating the required enabling environment to develop policies to promote UA in the city. The champions not only provided leadership, but they also brought other stakeholders into a synergistic collaboration. Also, other incentives, such as regular trainings, joint participation in conferences and introduction of novel programs, motivated stakeholders. Rewards and recognition can go a long way and should be included within the institutional action plan, with funds allocated for this from the onset.

In South Asia, all stakeholders agreed that the MPAP process was a good learning experience. Initially, participants did not feel comfortable with the aim of the process, which was to influence

policy making, as this was not part of their designated mandate. The importance of collecting baseline information to influence policy was not fully understood until a few years passed on. An example can be cited from Gampaha, where the local seed production was handled by a department that did not have market information. As a consequence, seed supply was regularly short. The MPAP process helped to analyze the extra demand and facilitated a change through the involvement of the provincial government.

In Magadi, the stakeholders identified for participation in the MPAP process had not been in a MSF before and, initially, it was difficult for them to visualize how such a project could become viable. A slow process of seeking permission and practical experiences were crucial in changing the mind-set from the initiation to taking action. When topics were linked to an institutional mandate, activity planning was found to be easy. For example, waste recycling and compost making received full support from the Town Municipal Council. However, they shied away from supporting agricultural activities (compost distribution and use), as they felt that such activities were the responsibility of the Department of Horticulture. The Department of Horticulture itself stated that their main focus was the rural farmers and urban farming was unknown to them. Also, the programs are usually debated at state level, and three- to five-year plans of activities are sent to the lower levels for implementation. Thus, the bottom-up process of influencing policy was alien to most stakeholders in and around Magadi. Therefore, consolidation of the ideas and understanding the overarching goals of the process took more time in Magadi than in the other cities. Constant turnover of officers who were appointed to the MSF was also an impediment, which meant that the process had to be repeated a number of times. As such, the MSF consolidation and action planning took about 2 years to come to fruition in Magadi.

Documentation and Communication

The MS process involved research, copious documentation, analysis and dissemination of a wide range of learning from diverse partners

at all levels. The monitoring and evaluation that was part of the internal MS process was very demanding, and required expertise and training. Poor process documentation skills among stakeholders prevented the maintenance of good records. Most cities needed training in this area, which was seen as a good general investment. Therefore, special trainings on report writing were held and an improvement in the writing was observed throughout the project period, which helped information sharing and communication among the various stakeholders. Maintaining a knowledge support and learning process through documentation and sharing, provided useful information on lessons learned and its incorporation into long-term plans. This ensured transparency and provided data for decision making.

Institutionalizing UA

The MPAP process aims at long-term impact through the incorporation of UA in city planning. The related process of the institutionalization of UA was different in all the cities. In some cities, the process started from scratch and, in others, it could build on related projects or initiatives. For example, in Gampaha, Sri Lanka, the Provincial Department of Agriculture was willing to incorporate UA in a formal way into the agenda, as they were familiar with the concept and had been practicing it previously (Ranasinghe 2009).

To sustain the process of institutionalization across different institutions, follow-up training and budget support were needed. In the example of Gampaha, leadership at the provincial level provided funds for sustaining the process while future proposals were developed. Other events which helped 'reaching up' (and 'reaching out') included study visits and sponsoring stakeholders to participate in local, regional and international fora, where success stories were shared and connections were made with other institutions and sectors.

Policy Influencing Activities

Policy change is key if institutional changes are to be sustained at national, provincial/state or local levels. The exact strategy will depend on the local

context and considering the scale of where change is targeted, the targeted institution, the current situation and a clear understanding of the changes needed to achieve a particular outcome. For example, in Accra, the capital of Ghana, the project teams used the advantage of its close proximity to ministries and politicians to take UA directly into the policy arena whereas teams in other cities may not have had this opportunity. Thus, policy seminars and advocacy were most helpful to start the review of bylaws at local level, and to also include UA in various national strategies. In Sri Lanka, the key step to reaching out to the national policy was a change in the provincial policy, which set an example for others. In India, the project started at local level, but quickly learned to better target the National Planning Commission to facilitate the recommendations for change to follow the correct pathway. The re-orientation was highly rewarded as it probably helped to see UA now officially recognized in India's Twelfth Five Year Plan (2012-2017). As in the case of Sri Lanka, concerted interest of local or regional 'champions' and like-minded people helped to push the agenda. In all the cases, the process was time consuming, and proponents have to be patient and expect to maintain their commitment to the very end.

The RUAF projects were exceptions among other projects, because IWMI was and is part of the RUAF Foundation and thus committed to supporting any UA-related policy process beyond the actual lifetime of the RUAF projects. Any project which aims at policy change will need such a programmatic support beyond the lifetime of the project, as the outcomes might only crystallize after 4 years or more from when the project ended.

Change projects also need to be opportunistic, seeking ongoing discussions or other initiatives. There can be strategic partners aiming at similar change and also strategic moments when cities discuss, for example, how best to combat increasing food prices, establish carbon sinks or reduce greenhouse gas (GHG) emissions (Dubbeling et al. 2009). UA can be seen as part of an overall strategy and solution to build, for example, resilient cities and support climate change adaptation (de Zeeuw et al. 2011).

Conclusions

The MPAP approach is complex, but has shown a significant level of flexibility to influence institutional and municipal agendas, policies and curricula under different cultural conditions even in a challenging domain such as UA, which is probably the least recognized farming system. The changes achieved are key elements in support of the impact pathway for research projects. The approach prefers to build on research, but also entails research components to gather further intelligence for informed decision making on issues of local relevance.

To ensure the sustainability of any institutionalization, policy dialogue and decision making, processes such as MPAP have to be widely understood, accepted and integrated through routine application to modify attitudes, institutional structures and organizational behavior. This is not an easy process. It requires an anchor institution with significant expertise to spearhead the process among the stakeholders as well as a budget to facilitate continuous stakeholder involvement.

The required technical capacities can be built-up through the process, especially where broader bottom-up approaches are not yet common. This includes professional capacities in organizing stakeholder meetings, facilitation of team processes, conflict management, advocacy, negotiation and lobbying skills, and other management skills which need to be developed.

Although the institutional and policy outcomes appear very positive, the study design did not allow the comparison of MPAP with other approaches facilitating impact. Many successes, especially those in Ghana beyond city level, were enabled by individuals or individual components of the overall MPAP process and not the lengthy process per se. Of particular interest is the Indian example, where change at national level was achieved with the potential to trigger change down

across the scales. This might not work in every setting, but appeared to be a valid alternative, at least in India, to investments in local processes, which is very much in contrast to the experience from Sri Lanka.

Consensus building under the MPAP process requires broad consultations and creation of ownership, and all this requires patience, flexibility and time for reflective learning. The MPAP process is thus more appropriate for a longer term programmatic approach than for a common three-year individual project lifetime.

The MPAP process also requires high levels of commitment of individual participants and representatives of institutions. The commitments are linked to individual accountability/institutional accountability and also to resource allocation of the institutions. In achieving goals, clear terms of reference and M&E are important, if resources are to be pooled together and managed. Similarly, information sharing and communication among the various stakeholders is a prime requisite for the effective functioning of the team. This also helps to ensure transparency, provide data for decision making and allow sharing of lessons learned, to which this report is aiming to contribute.

Based on the successes and experiences gained under the RUAF Foundation, the MPAP process is highly recommended as a valid approach to influence institutional decision making, policies and curricula along the impact pathway (Cofie et al. 2010; Larbi and Cofie 2010; Amerasinghe 2010). However, there are significant regional differences in how best to achieve policy change (bottom-up, top-down), which requires careful attention in order to achieve the highest returns on investment. Finally, a 'light version' of the MPAP framework might be desirable to reduce its complexity, and increase stakeholder buy-in and sustainability. More research in this direction is encouraged.

References

- Agboola, O.O.; Bloxom, R.W. 1996. Profile of the Ibadan metropolitan area. Sustainable Ibadan Project. Ibadan, Nigeria.
- Amerasinghe, P. 2010. Building synergies to promote urban agriculture in Gampaha, Sri Lanka. In: *Cities, poverty and food: Multi-stakeholder policy and planning on urban agriculture*, eds., Dubbeling, M.; de Zeeuw, H.; van Veenhuizen, R. Rugby, UK: Practical Action Publishing. Pp. 110-119.
- Amerasinghe, P.; Gammanpila, U.; Kodikara, S.; Mahindapala, R. 2011. Developing institutional synergies for effective urban agriculture development in Sri Lanka. *Urban Agriculture Magazine* 25: 25-27.
- Aubrya, C.; Ramamonjisoab, J.; Dabatc, M.H.; Rakotoarisoad, J.; Rakotondraibee, J.; Rabeharisoaf, L. 2012. Urban agriculture and land use in cities: An approach with the multi-functionality and sustainability concepts in the case of Antananarivo (Madagascar). *Land Use Policy* 29: 429-439.
- Boischio, A.; Clegg, A.; Mwagore, D. 2006. *Health risks and benefits of urban and peri-urban agriculture and livestock in sub-Saharan Africa*. Urban Poverty and Environment Series Report 1. Ottawa: International Development Research Centre (IDRC). 136p.
- Campilan, D.; Drechsel, P.; Joecker, D. 2001. Monitoring and evaluation and its adaptation to urban and peri-urban agriculture. *Urban Agriculture Magazine* 5: 40-42.
- Cofie, O.O.; Drechsel, P. 2007. Water for food in the cities: The growing paradigm of irrigated (peri)-urban agriculture and its struggle in sub-Saharan Africa. *African Water Journal* 1(1): 23-32.
- Cofie, O.O.; Serena, M.; Larbi, T. 2010. From rehabilitation towards development in Freetown, Sierra Leone. In: *Cities, poverty and food: Multi-stakeholder policy and planning in urban agriculture*, eds., Dubbeling, M.; de Zeeuw, H.; van Veenhuizen, R. Rugby, UK: Practical Action Publishing. Pp. 102-109.
- Cole, D.C.; Lee-Smith, D.; Nasinyama, G.W. (eds.) 2008. *Healthy city harvests: Generating evidence to guide policy on urban agriculture*. Lima, Peru: International Potato Center (CIP)/Urban Harvest; and Kampala, Uganda: Makerere University Press.
- De Zeeuw, H. 2005. Concepts and definition of Urban Agriculture. In: *RUAF-CFF Programme Training Manual*. Module 1, Hand-out 1.
- De Zeeuw, H.; Dubbeling, M. 2009. *Cities, food and agriculture: Challenges and the way forward.* Discussion paper for the Technical Consultation "Agriculture, Food and Cities", September 24-25, 2009, Rome, Italy, Food and Agriculture Organization of the United Nations Food for the Cities Multi-disciplinary Action (FAO-FCIT) and International Network of Resource centres on Urban Agriculture and Food security (RUAF Foundation), Leusden, the Netherlands.
- De Zeeuw, H.; van Veenhuizen, R.; Dubbeling, M. 2011. The role of urban agriculture in building resilient cities in developing countries. Foresight Project of Global Food and Farming Futures. *The Journal of Agricultural Science* 149(S1): 153-163.
- Drechsel, P. 2008. The world food crisis A push for urban farming. In: *The food and water crisis*. Water Figures: Quarterly newsletter of the International Water Management Institute (IWMI), Issue 2. Pp. 5-6. Available at www. iwmi.cgiar.org/News_Room/Newsletters/Water_Figures/PDFs/WF_Issue_2_2008.pdf (accessed on October 18, 2013).
- Drechsel, P.; Cofie, O.O.; van Veenhuizen, R.; Larbi, T.O. 2008. Linking research, capacity building, and policy dialogue in support of informal irrigation in urban West Africa. *Irrigation and Drainage* 57(3): 268-278.
- Drechsel, P.; Graefe, S.; Sonou, O.; Cofie, O. 2006. *Informal irrigation in urban West Africa: An overview*. Colombo, Sri Lanka: International Water Management Institute (IWMI). 34p. (IWMI Research Report 102).
- Dubbeling, M.; Campbell, M.C.; Hoekstra, F.; van Veenhuizen, R. 2009. Editorial: Building resilient cities. *Urban Agriculture Magazine* 22: 3-11.

- Dubbeling, M.; de Zeeuw, H. 2007. *Multi-stakeholder policy formulation and action planning for sustainable urban agriculture development*. RUAF Working Paper No. 1. Leusden, the Netherlands: Resource Centres on Urban Agriculture and Food Security (RUAF Foundation). 47p. Available at http://www.ruaf.org/node/2291 (accessed on October 19, 2013).
- Dubbeling, M.; de Zeeuw, H.; van Veenhuizen, R. (eds.). 2010. *Cities, poverty and food: Multi-stakeholder policy and planning in urban agriculture*. Rugby, UK: Practical Action Publishing. 192p.
- Dubbeling, M.; Merzthal, G. 2006. Sustaining urban agriculture requires the involvement of multiple stakeholders. In: Cities farming for the future: Urban agriculture for green and productive cities, ed., van Veenhuizen, R. The Netherlands: Resource Centres on Urban Agriculture and Food Security (RUAF Foundation); Canada: International Development Research Centre (IDRC); and Philippines: International Institute of Rural Reconstruction (IIRR). Pp. 19-52.
- FAO (Food and Agriculture Organization of the United Nations). 2001. *Urban and peri-urban agriculture: A briefing guide for the successful implementation of urban and peri-urban agriculture in developing countries and countries of transition.* The Special Programme for Food Security (SPFS). Handbook Series, volume III, revision 2.
- GSS (Ghana Statistical Service). 2012. 2010 Population and housing census: Provisional results, Accra, Ghana.
- IWMI (International Water Management Institute). 2013. *Urban agriculture gets policy-level support in Sri Lanka's Western Province*. Colombo, Sri Lanka: International Water Management Institute (IWMI). 2p. (IWMI Success Stories 16). Available at www.iwmi.cgiar.org/Publications/Success_Stories/PDF/2013/Issue_16-Urban_agriculture_gets policy-level support in Sri Lankas Western Province.pdf (accessed on October 19, 2013).
- IWMI-RUAF (Resource Centres on Urban Agriculture and Food Security). 2008a. A strategic agenda for urban and peri-urban agriculture in Accra, Ghana. Available at http://ruaf.iwmi.org/Data/Sites/4/PDFs/accra_city_strategic_agenda.pdf (accessed on October 19, 2013).
- IWMI-RUAF. 2008b. A strategic agenda for the development of urban and peri-urban agriculture, Ibadan, Nigeria. Available at http://ruaf.iwmi.org/Data/Sites/4/PDFs/ibadan_city_strategic_agenda.pdf (accessed on November 5, 2013).
- IWMI-RUAF. 2008c. *Gampaha city strategy agenda for urban/periurban agriculture, 2008-2012.* Available at http://ruaf-asia.iwmi.org/Data/Sites/6/PDFs/ruafgampahacsa.pdf (accessed on November 5, 2013).
- IWMI-RUAF. 2008d. *Magadi city strategy agenda for urban/periurban agriculture, 2008-2012*. Available at http://ruaf-asia.iwmi.org/Data/Sites/6/PDFs/ruafmagadicsa.pdf (accessed on November 5, 2013).
- IWMI-RUAF. 2008e. *Urban and peri-urban agriculture in Freetown: A five year rolling city strategic agenda (2009-2013)*. Available at http://ruaf.iwmi.org/Data/Sites/4/PDFs/freetown_city_strategic_agenda.pdf (accessed on November 5, 2013).
- Klerkx, L.; van Mierlo, B.; Leeuwis, C. 2012. Evolution of systems approaches to agricultural innovation: Concepts, analysis and interventions. In: *Farming systems research into the 21st century: The new dynamic*, eds., Darnhofer, I.; Gibbon, D.; Dedieu, B. Dordrecht, the Netherlands: Springer Science+Business Media.
- Kwadzo, G.; Jatoe, J.; Cofie, O.; Amoah, P.; Forkuor, G. 2011. *Urban agriculture: A sustainable solution to alleviating urban poverty, addressing the food crisis, and adapting to climate change, Accra case study.* Report submitted to RUAF Foundation. 186p.
- Larbi, T.O.; Cofie, O. 2010. Gradual institutionalization of urban agriculture in Accra, Ghana. In: *Cities, poverty and food: Multi-stakeholder policy and planning in urban agriculture*, eds., Dubbeling, M.; de Zeeuw, H.; van Veenhuizen, R. Rugby, UK: Practical Action Publishing. Pp. 80-87.
- Lovell, S.T. 2010. Multifunctional urban agriculture for sustainable land use planning in the United States. *Sustainability* 2(8): 2499-2522.
- MoA (Ministry of Agriculture). 2011. *Guidelines for the vegetable initiative for urban clusters*. New Delhi, India: Department of Agriculture and Cooperation, Ministry of Agriculture, Government of India. 18p.

- Mougeot, L.J.A. 2000. Urban agriculture: Definition, presence, potentials and risks, and policy challenges. In: *Growing cities, growing food: Urban agriculture on the policy agenda. A reader on urban agriculture*, eds., Bakker, N.; Dubbeling, M.; Gündel, S.; Sabel-Koschella, U.; de Zeeuw, H. Feldafing, Germany: DSE/ETC. Pp. 99-117.
- Obuobie, E.; Keraita, B.; Danso, G.; Amoah, P.; Cofie, O.O.; Raschid-Sally, L.; Drechsel, P. 2006. *Irrigated urban vegetable production in Ghana: Characteristics, benefits and risks.* IWMI-RUAF-IDRC-CPWF. Accra, Ghana: International Water Management Institute (IWMI). 150p. Available at www.cityfarmer.org/GhanalrrigateVegis.html (accessed on October 19, 2013).
- Ranasinghe, T.T. 2009. *Manual of low/no-space agriculture (L/N-S) -cum- family business gardens (FBG)*. Colombo, Sri Lanka: International Water Management Institute (IWMI); Leusden, the Netherlands: International Network of Resource Centres on Urban Agriculture and Food Security (RUAF Foundation). Available at http://www.iwmi.org/Publications/Other/Manuals/FBG_Manual.pdf (accessed on October 19, 2013).
- Smit, J.; Bailkey, M. 2006. Urban agriculture and the building of communities. In: *Cities farming for the future: Urban agriculture for green and productive cities*, ed., van Veenhuizen, R. The Netherlands: Resource Centres on Urban Agriculture and Food Security (RUAF Foundation); Canada: International Development Research Centre (IDRC); and Philippines: International Institute of Rural Reconstruction (IIRR). Pp. 145-170.
- Smits, S.; Moriarty, P.; Sijbesma, C. (eds.). 2007. *Learning alliances: Scaling up innovations in water, sanitation and hygiene*. Delft, the Netherlands: IRC International Water and Sanitation Centre. (Technical paper series; no: 47). 174p.
- Smit, J.; Nasr, J.; Ratta, A. 2001. *Urban agriculture: Food, jobs and sustainable cities.* Second edition. Published with permission from the United Nations Development Programme. Washington, DC, USA: The Urban Agriculture Network, Inc.
- Statistics Sierra Leone. 2006. 2004 Population Census. Freetown, Sierra Leone: Government of Sierra Leone.
- Tidball, K.G.; Krasny, M.E. 2006. From risk to resilience: What role for community greening and civic ecology in cities? In: *Social learning towards a sustainable world*, ed., Wals, A.E.J. Wageningen, the Netherlands: Wageningen Academic Publishers. Pp. 149-164.
- UNCHS (Habitat) (United Nations Centre for Human Settlements [Habitat]). 2001. *Tools to support participatory urban decision making.* Urban governance toolkit series.
- van Veenhuizen, R.; Danso, G. 2007. *Profitability and sustainability of urban and peri-urban agriculture*. Agricultural Management, Marketing and Finance Occasional Paper 19. Rome, Italy: Food and Agriculture Organization of the United Nations (FAO).
- Warner, J. 2005. Multi-stakeholder platforms: Integrating society in water resource management? *Ambiente & Sociedade* 8(2): 4-28.
- Warner, J. 2006. More sustainable participation? Multi-stakeholder platforms for integrated catchment management. *Water Resources Development* 22(1): 15-35.
- Winnebah, T.; Cofie, O. 2007. Urban farms after a war. In: *State of the world 2007: Our urban future*. New York, London: The Worldwatch Institute: Pp. 64-65.

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