REPORT OF THE MINISTERS' CONFERENCE ON URBAN AND PERI-URBAN AGRICULTURE : PROSPECTS FOR FOOD SECURITY AND GROWTH IN EASTERN AND SOUTHERN AFRICA.

August 28-29, 2003,
Sheraton Hotel – Harare - Zimbabwe.

Report compiled and edited by
Shingirayi Mushamba
Takawira Mubvami,
Nelson Marongwe
Kudazi Chatiza

Table of Contents.

REPORT OF THE MINISTERS' CONFERENCE ON.....I

URBAN AND PERI-URBAN AGRICULTURE : I

PROSPECTS FOR FOOD SECURITY AND GROWTH IN EASTERN AND SOUTHERN AFRICA. I

REPORT COMPILED AND EDITED BY I
SHINGIRAYI MUSHAMBA I
TAKAWIRA MUBVAMI, ... I
NELSON MARONGWE I
KUDAZI CHATIZA I
LIST OF ACRONYMS X
AMICAAL: X
CBOs: COMMUNITY BASED ORGANIZATIONS X
EA: ENVIRONMENTAL ASSESSMENT X
EPM: ENVIRONMENTAL PLANNING AND MANAGEMENT X
FANRPAN: THE FOOD, AGRICULTURE AND NATURAL RESOURCES POLICY X
HIV/AIDS: HUMAN IMMUNE VIRUS/ACQUIRED IMMUNE DEFICIENCY SYNDROME X
IDRC: INTERNATIONAL DEVELOPMENT RESEARCH CENTER X
MDP: MUNICIPAL DEVELOPMENT PARTNERSHIP. X
NGOs: NON GOVERNMENTAL ORGANIZATIONS X
UA: URBAN AGRICULTURE X
UNICEF: UNITED NATIONS CHILDREN FUND X
UPA: URBAN AND PERI-URBAN AGRICULTURE. X

FOREWORD BY THE HOST MINISTER XI

FOREWORD BY THE REGIONAL DIRECTOR OF MDP XII

CONFERENCE IN PICTURES XV

CONFERENCE PROCEEDINGS 1

BACKGROUND INFORMATION ON THE CONFERENCE 1

CONFERENCE OBJECTIVES. 2
EXPECTED OUTCOMES, OUTPUTS AND IMPACT OF THE CONFERENCE. 3
CONFERENCE METHODOLOGY. 3
OPENING REMARKS BY THE REGIONAL DIRECTOR OF MDP. 3
WELCOME REMARKS BY HONORABLE DR. IGNATIUS CHOMBO (MINISTER OF LOCAL GOVERNMENT, PUBLIC WORKS AND NATIONAL HOUSING, ZIMBABWE) 5
OFFICIAL OPENING BY HONORABLE J. L. NKOMO (MINISTER OF SPECIAL AFFAIRS IN THE OFFICE OF THE PRESIDENT AND CABINET, ZIMBABWE) 6

KEYNOTE ADDRESS ON THE IMPACTS OF URBAN AGRICULTURE AND PROSPECTS FOR ITS GROWTH IN EASTERN AND SOUTHERN AFRICA – BY DR TOBIAS TAKAVARASHA 7

COUNTRY PRESENTATIONS 9

URBAN AGRICULTURE IN THE REPUBLIC OF KENYA – PRESENTED BY MILLICAH THAIRU & FRANCISCA MAINA. 10
URBAN AGRICULTURE IN THE REPUBLIC OF MALAWI, PRESENTED BY HON. HENRY MIDIANI. 12
THE KINGDOM OF SWAZILAND, PRESENTED BY HON. ALBERT SHABANGU. 13
URBAN AGRICULTURE IN THE UNITED REPUBLIC OF TANZANIA – PRESENTED BY HON. MIZENGO PINDA. 16
URBAN AGRICULTURE IN THE REPUBLIC OF ZIMBABWE – PRESENTED BY DR. VINCENT HUNGWE 18
THEMATIC PRESENTATIONS 22
URBAN AGRICULTURE AND URBAN ENVIRONMENTAL CHALLENGE IN ZIMBABWE. BY CRISPEN MASEVA 22
LAND, WATER AND OTHER RESOURCES FOR SUSTAINABLE URBAN AGRICULTURE – PAPER BY TAKAWIRA MUBVAMI 25
SUPPORT SERVICES TO URBAN AGRICULTURE – BY GODFREY MUDIMU AND SHINGIRAYI. MUSHAMBA 30

URBAN AGRICULTURE IN EASTERN AND SOUTHERN AFRICA: EMERGING POLICY ISSUES. 32

2. INFORMATION COLLECTION, MANAGEMENT AND DISSEMINATION. 33
3. LINKING UPA TO ONGOING COMMUNITY PROGRAMS. 34
4. DECENTRALIZATION/REFORM EFFORTS AND IMPLICATIONS FOR URBAN AGRICULTURE. 34
5. URBAN AGRICULTURE AND THE URBAN WASTE MANAGEMENT DILEMMA. 35
6. INSTITUTIONAL CAPACITY AND LEVEL OF URBAN FARMER ORGANIZATION. 35
7. URBAN AGRICULTURE AND THE RESOURCE PROVISION DILEMMA. 35
8. ISSUES OF STRATEGIC PERCEPTION AND CONCEPTION. 35
9. POLICY, LEGISLATION AND INSTITUTIONAL ARRANGEMENTS 36
10. URBAN AGRICULTURE AND THE URBAN ENVIRONMENTAL CHALLENGE 36

11. THE HARARE DECLARATION 37

BOX 2 - THE HARARE DECLARATION. 38

APPENDICES. 39

ANNEX 1: THEMATIC PAPER ON THE IMPACTS OF URBAN AGRICULTURE, INTEGRATION INTO URBAN DEVELOPMENT AND PROSPECTS FOR FOOD SECURITY AND GROWTH IN EASTERN AND SOUTHERN AFRICA 1
PAPER BY DR TOBIAS TAKAVARASHA, CHIEF EXECUTIVE OFFICER 1
FOOD AGRICULTURE AND NATURAL RESOURCES POLICY ANALYSIS NETWORK (FANRPAN) 1
FANRPAN MISSION 1
- TO COORDINATE, INFLUENCE AND FACILITATE POLICY RESEARCH, ANALYSIS AND DIALOGUE AT THE NATIONAL, REGIONAL AND GLOBAL LEVELS IN ORDER TO DEVELOP THE FOOD, AGRICULTURE AND NATURAL RESOURCES SECTOR THROUGH NETWORKING, CAPACITY BUILDING AND GENERATION OF INFORMATION FOR THE BENEFIT OF ALL STAKEHOLDERS IN THE SADC REGION 1

FANRPAN OBJECTIVES 1
- PROMOTE APPROPRIATE AGRICULTURAL POLICIES IN ORDER TO REDUCE POVERTY, INCREASE FOOD SECURITY AND ENHANCE SUSTAINABLE AGRICULTURAL DEVELOPMENT IN THE SADC REGION; 1
- IMPROVE POLICY ANALYSIS, RESEARCH AND FORMULATION OF PRIORITY SADC THEMES; . 1
- DEVELOP HUMAN AND INSTITUTIONAL CAPACITY FOR CO-ORDINATED DIALOGUE AMONG ALL STAKEHOLDERS; 1
- IMPROVE POLICY DECISION MAKING THROUGH THE GENERATION, EXCHANGE AND USE OF POLICY RELATED INFORMATION 1

FANRPAN WILL ACHIEVE THESE OBJECTIVES THROUGH: 1
- STAKEHOLDER DRIVEN POLICY STUDIES, ... 1
- DIALOGUE, ... 1
- NETWORKING WITH SIMILAR POLICY RESEARCH INSTITUTES 1
- DISSEMINATING RESULTS TO STAKEHOLDERS THROUGH WORKSHOPS/SEMINARS, NEWSLETTER, INTERNET, ... 1
- CAPACITY BUILDING/TRAINING 1
- COLLABORATING WITH OTHER SADC PROGRAMMES AND INITIATIVES 1

TYPE OF ORGANIZATION 1
- AN AUTONOMOUS ORGANIZATION WITH A CONSTITUTION AND ELECTED BOARD. TO REPRESENT POLICY INTERESTS OF VARIOUS STAKEHOLDERS 1

TRADE POLICIES AND AGRICULTURAL TRADE IN THE SADC REGION: CHALLENGES AND IMPLICATIONS 1
- REVIEW THE PERFORMANCE OF TRADE POLICIES IN THE REGION, BOTH POLICIES OF INDIVIDUAL MEMBER STATES AND SADC POLICIES. 1
- ANALYZE THE FLOW OF AGRICULTURAL TRADE IN THE SADC REGION 1
- INVESTIGATE SECTOR SPECIFIC TRADE POLICIES, SUCH AS TARIFF AND NON-TARIFF POLICIES. THIS WILL INVOLVE ASSESSING SHORTFALLS AND IMPACTS OF TARIFF, NON-TARIFF AND TECHNICAL BARRIERS TO TRADE IN THE REGION, WITH PARTICULAR FOCUS TO TRADE IN AGRICULTURE. 2

ASSESSING IMPACT OF HIV/ AIDS ON THE FANR SECTOR IN SADC 2
- THE BROAD OBJECTIVE OF THE STUDY IS TO UNDERTAKE A MULTI-COUNTRY ASSESSMENT OF THE IMPACT OF HIV/AIDS ON THE FANR SECTOR, THAT WILL INCLUDE A REVIEW OF LITERATURE. THE STUDY WILL TAKE ACCOUNT OF WHAT HAS BEEN DONE OR NEEDS TO BE DONE

TO IMPROVE IMPLEMENTATION STRATEGIES. IT WILL ASSIST IN CREATING A DATABASE ON THE IMPACT OF THE DISEASE AT THE MICRO AND MACRO LEVEL AT THE NATIONAL AND REGIONAL LEVEL AND MAKE APPROPRIATE RECOMMENDATIONS FOR USE BY POLICY MAKERS AND STAKEHOLDERS. 2
OBJECTIVES 2
- TO IDENTIFY STRATEGIES TO ADDRESS CO-FACTORS OF VULNERABILITY TO THE EPIDEMIC AND ITS IMPACT. THIS WILL ASSIST IN DEVELOPING SPECIFIC INTERVENTION MEASURES TO COUNTERACT THE NEGATIVE IMPACTS OF THE DISEASE ON AGRICULTURAL COMMUNITIES AND THEIR HOUSEHOLDS; AND 2
- TO ESTABLISH MECHANISMS AND STRATEGIES DESIGNED TO MITIGATE THE NEGATIVE EFFECTS OF THE DISEASE. THERE IS ALSO NEED TO INCORPORATE STRATEGIES AND POLICIES TO COMBAT HIV/AIDS IN AGRICULTURE AND NATIONAL DEVELOPMENT PLANNING IN GENERAL. . 2
DEFINITION OF URBAN AND PERI-URBAN AGRICULTURE 2
- URBAN AND PERI-URBAN AGRICULTURE REFERS TO AGRICULTURAL ACTIVITIES LOCATED WITHIN (INTRA-URBAN) OR ON THE FRINGES (PERI-URBAN) OF A TOWN, A CITY OR A METROPOLIS, WHICH GROWS OR RAISES PROCESSES OR DISTRIBUTES A DIVERSITY OF FOOD AND NON-FOOD PRODUCTS, USING LARGELY HUMAN AND MATERIAL RESOURCES, PRODUCTS AND SERVICES COMING FROM IN AND AROUND THAT URBAN AREA, AND IN TURN SUPPLYING HUMAN AND MATERIAL RESOURCES, PRODUCTS AND SERVICES LARGELY TO THAT URBAN AREA. 2
WHY DO HOUSEHOLDS ENGAGE IN URBAN AGRICULTURE 2
- PRODUCTION FOR HOME CONSUMPTION 2
- READY MARKET 2
- INCOME ENHANCEMENT 2
- RESPONSE TO ECONOMIC CRISIS 2
- HIGH PRICES OF MARKETED FOOD 2
- SUPPLEMENTARY EMPLOYMENT 2
- AVAILABILITY OF VACANT LAND 2
- FARMING AS A HOBBY 2
CONSTRAINTS AFFECTING THE GROWTH OF URBAN AGRICULTURE 3
- INSECURE LAND TENURE 3
- LIMITED ACCESS TO ARABLE LAND 3
- THEFT AND LAND CONFLICTS 3
- LIMITED ACCESS TO WATER 3
- BIAS TOWARDS RURAL AGRICULTURE 3
- PROHIBITIVE URBAN POLICIES AND REGULATIONS 3
- LACK OF SUPPORT SERVICES AND PRODUCTIVE INPUTS 3
- LACK OF ORGANIZATION AMONG URBAN FARMERS 3
HEALTH AND ENVIRONMENTAL RISKS RELATED TO URBAN AGRICULTURE 3
- INAPPROPRIATE HANDLING OF AGRO-CHEMICALS BY PRODUCERS 3
- CROP SELECTION OR LOCATION WITHOUT DUE REGARD TO AIR, WATER AND SOIL POLLUTION 3
- DISPOSAL OF WASTES FROM CROPS AND LIVESTOCK 3
- POOR HANDLING DURING MARKETING AND DISTRIBUTION 3
- DEFORESTATION, SOIL EROSION 3

TYPES OF URBAN AGRICULTURE 3
- VEGETABLE PRODUCTION IN PERI-URBAN FARMS 3
- BACKYARD GARDENING 3
- SCHOOL GARDENS 3
- AGRO-FORESTRY AND FRUIT FREES 3
- PLANT NURSERIES 3
- VARIOUS TYPES OF LIVESTOCK 3
- FOOD CROPS (MAIZE, GROUNDNUTS, POTATOES) 3

POLICY PERSPECTIVES OF URBAN AGRICULTURE 3
- LAND ALLOTMENTS AND CONFLICT PREVENTION 3
- ALLOCATION OF EXTENSION SERVICES AND RESOURCES 3
- SHOULD CITY PLANNERS INCLUDE AGRICULTURE 3
- COST AND FOOD SECURITY IMPLICATIONS 3
- NEGATIVE HEALTH AND ENVIRONMENTAL EFFECTS 3
- EMPLOYMENT, YOUTH AND GENDER ISSUES 3
- SPECIAL CASE FOR DISADVANTAGED GROUPS 3
- ACCURATE STATISTICS ON PRODUCTION 3

AGRICULTURAL POLICY ENVIRONMENT 1
FOOD SECURITY 2
URBAN AGRICULTURE 2
ONGOING INITIATIVES 3
CONCLUSION 5

TABLE 1: POPULATION OF MAJOR URBAN CENTRES IN TANZANIA 3

INTRODUCTION 1

COUNTRY 18
MALAWI 19

A NOTE ON CONTRIBUTORS

The Ministers Conference on Urban Agriculture: Prospects for Food Security and Growth in Eastern and Southern Africa was a collaborative effort of many partners.

1. The Minister of Local Government, Public Works and National Housing hosted the Conference and provided official vehicles for his counterparts.
2. Funding from the United Nations Development Programme and the United Nations Children's Education Fund was utilized in hosting all the Ministers and heads of delegations, transportation and fees for some resource persons,
3. Funding from the International Development Research Centre – Cities Feeding People Programme was used to provide conference facilities, conference materials and meals. Further, IDRC-CFP financially supports the three year research project on Access to Land for Urban Agriculture by the Urban Resource Poor, on the Basis of which the paper by Takawira Mubvami was prepared and presented.
4. The Food and Agriculture Organization provided funding for one thematic paper and editing of the Conference Report,
5. The Resource Centre on Urban Agriculture and Forestry provided funding for printing and distribution of the Conference Report,
6. Participating delegates from Kenya, Malawi, Tanzania and Swaziland met their own travel expenses,
7. The Municipal Development Program Eastern and Southern Africa, with support from the Ministry of Local Government, Public Works and National Housing was responsible for coordination of the conference.

Acknowledgements.

The organizers of the Ministers' Conference, namely the Ministry of Local Government, Public Works and National Housing, Government of Zimbabwe and the Municipal Development Partnership for Eastern and Southern Africa, in partnership with The Food, Agriculture and Natural Resources Policy Analysis Network [FANRPAN], The Food and Agriculture Organization – Regional Office for Southern Africa [FAO-SAFR] and The Resource Center on Urban Agriculture and Food Security, The Netherlands [RUAFS] are indebted to participants, resource persons and funding partners for their contributions which made the Conference a success.

The organizers gratefully acknowledge the financial support received from the United Nations Development Program [UNDP] and The United Nations Children's Education Fund [UNICEF] through the Ministry of Local Government, Public Works and National Housing, Zimbabwe and The International Development Research Center – Cities Feeding People Program [IDRC-CFP], and The Resource Center on Urban Agriculture and Forestry [RUAF], The Netherlands.

The Governments of Kenya, Malawi, Swaziland and Tanzania supported the workshop by providing for the travel of the delegations to and from Harare, Zimbabwe. Each delegation also prepared a country position paper, which was shared in the Conference.

Special thanks go to the ministers and heads of delegations from Kenya, Malawi, Swaziland, Tanzania and Zimbabwe, whose country presentations and participation at the workshop helped to steer discussions and yielded the desired results.

The Conference is also indebted to Dr. Vincent Hungwe, Permanent Secretary, Ministry of Local Government, Public Works and National Housing, for his ably facilitating the workshop and leading participants n crafting the Harare Declaration on Urban Agriculture.

We would also like to thank resource persons who facilitated during thematic sessions, the secretariat comprising of staff from the Ministry of Local Government, Public Works and National Housing, The Municipal Development Partnership and the Food, Agriculture Natural Resources Policy Analysis Network for working tirelessly behind the scenes, prior to, during and after the workshop.

Organizing Team
Ashley Ndhlovu
Shingirayi Mushamba
Takawira Mubvami
Kuwanda

List of Acronyms

AMICAAL:	
CBOs:	Community Based Organizations
EA:	Environmental Assessment
EPM:	Environmental Planning and Management
FANRPAN:	The Food, Agriculture and Natural Resources Policy Analysis Network
FAO-SAFR:	The Food and Agriculture Organization – Regional Office for Southern Africa
HIV/AIDS:	Human Immune Virus/Acquired Immune Deficiency Syndrome
IDRC:	International Development Research Center
MDP:	Municipal Development Partnership.
NGOs:	Non Governmental Organizations
RUAFS:	The Resource Center on Urban Agriculture and Food Security
UA:	Urban Agriculture
UNDP:	United Nations Development Programmed
UNICEF:	United Nations Children Fund
UPA:	Urban and Peri-Urban Agriculture.

Passport Photo

Foreword By The Host Minister

It was an honour to host the two-day Ministers' Conference, which discussed and laid the framework for integrating urban and peri-urban agriculture into the development strategies of the cities of the region. In the deliberations that ensued the central theme that emerged was the realization and acceptance of urban and peri-urban agriculture as a legitimate practice that ought to be properly organized, coordinated and managed in a sustainable manner.

The robust and exhaustive discussions that were a hallmark of the workshop identified key areas that require urgent attention if urban and peri-urban agriculture was to become a complementary strategic force in the realm of poverty reduction and mainstream economic development. These among others included institutional and legal aspects, environmental impacts, capacity building and the role of urban agriculture in food security and poverty reduction.

Pertinent to this discourse is the challenge of raising the profile of urban and peri-urban agriculture in the region. Related to the foregoing is the issue of who is really the target and beneficiary for consideration in the practice of urban and peri-urban agriculture. Certainly you will agree that there are no easy answers to these probing questions.

But nevertheless, one thing is sure, urban and peri-urban agriculture has legitimate stake in the betterment of livelihoods in our urban centres in the region and as such let us give it a chance.

Dr. I.M.C. Chombo (MP)
MINISTER OF LOCAL GOVERNMENT PUBLIC WORKS AND NATIONAL HOUSING, GOVERNMENT OF ZIMBABWE

Pasport Photo

Foreword By The Regional Director of MDP

Urban agriculture is one of the main activities urban residents are undertaking in an effort to among other things a) ensure food security b) alleviate poverty and c) reduce environmental degradation in their areas. Urban agriculture contributes greatly to the food security of many urban residents in Eastern and Southern Africa. City case studies in the region by researchers such as Mlozi 1992; Drescher, 1996; Mbiba, 1995; Mudimu, 1996 show a considerable degree of self-sufficiency in cereal, fresh vegetable and small livestock production. It was estimated that the number of people obtaining part of their food from urban agriculture in six East and Southern African countries will rise from about 25 million to 40 million by 2020. It is estimated that globally urban agriculture now produces fifteen percent of all food consumed in urban areas, and that this percentage is likely to double within twenty years, [UNCHS (Habitat), 2001].

Self-produced food in the urban areas provides nutritious food otherwise unaffordable, replaces purchased staples or supplements these with more nutritious foodstuff, affords savings which can be spent on non-produced foodstuff or other needs and generates principal income which can be reinvested in other urban businesses. Urban agriculture also provides employment to a large number of urban residents. In Nairobi, for example, 25% of the population is employed in urban agricultural activities. In addition, urban agriculture is one of the several tools for making productive use of urban open spaces, treating and or recovering urban waste and managing freshwater resources more effectively. The relation between urban agriculture and waste management is most pronounced in the use of organic wastes. Urban agriculture can indirectly improve urban water management because green spaces with permeable land surfaces allow rainwater and runoff to drain through the soil.

Intensive high value urban and urban agriculture has great potential in addressing poverty through the creation of employment, improving nutrition for HIV/AIDS sufferers and food security if given support. However, urban and peri-urban agriculture has not gained enough support from governments in the Eastern and Southern Africa region. Policy makers and senior managers need to be made aware of the issues that need to be addressed to promote urban and peri-urban agriculture.

NEPAD also deals with issues of poverty, food security and HIV/AIDS. It is a people- centered initiative that tries to deal with various development problems on the continent. UN HABITAT has unveiled what they call the NEPAD city. One of the frameworks for priority areas of action includes urban agriculture as a strategy for sustainable cities. Having recognized that urban agriculture is an immediate livelihood in time of conflict and disaster, it calls for the reservation of and

systematic use of peri-urban land for, among other issues, agricultural activities. This is a direct recognition of the fact that urban agriculture is here to stay and its proper planning will contribute to the development of a sustainable NEPAD city. It is against this background that the MDP, in partnership with the Ministry of Local Government, Public Works and National Housing, FAO and FANRPAN initiated the development of case studies on urban agriculture in the region.

From 28 to 29 August 2003, a Ministers' Conference on Urban and Peri-urban Agriculture was held at the Harare Sheraton Hotel and Conference Center in Zimbabwe in an effort to share experiences and identify prospects for UPA and develop a road map for the institutional, policy and technical support required to enhance UPA. Thus among others, the workshop sought:

1. To facilitate the sharing of experiences on the issues of urban & peri-urban agriculture in the sub-region.
2. To come up with strategies to enhance urban food security, nutrition and local economic growth and development through intensive high value (peri) urban agriculture development.
3. To come up with strategies for improving the nutritional status of HIV/AIDS sufferers through urban agriculture.
4. Identify key policy issues for urban agriculture in the region.

Seventy participants attended the Conference from five countries, namely Kenya, Malawi, Tanzania, Swaziland and the hosts, Zimbabwe. The delegates included the Ministers of Local Government from Swaziland and Zimbabwe, Deputy Ministers of Local Government from Malawi and Tanzania, The Permanent Secretary in the Ministry of Local Government in Zimbabwe, the Chief Legal Advisor and the Coordinator of Local Government Reforms in the Ministry of Local Government in Kenya, the Secretary General of the Africa Union of Local Authorities, the Regional Directors of MDP and IUCN, the Executive Director of Food Agriculture Natural Resources Policy Analysis Network, the Assistant Representative for the UN Food and Agriculture Organization and the Regional Coordinator of Urban Harvest. Other delegates to the conference are as listed in Annex 10.

The workshop shared experiences and tried to identify prospects for UPA and the type of institutional, policy and technical support required to enhance development of urban agriculture production.

The Conference recognized the significant contribution of urban agriculture to food security of urban households, generation of jobs and income, self-esteem and environmental improvement. As a result of the Conference a declaration, called the Harare Declaration on Urban Agriculture was made. The declaration is

attached to this report as an annex. In the declaration, governments of the participating countries committed themselves to integrate urban agriculture into their urban economies and to provide an enabling environment for the sector to grow.

Further, in the declaration, the participating governments committed themselves to include Urban Agriculture in their programmes to improve food security, promote growth and to alleviate poverty and achieve sustainable development.

As other countries were unable to participate in the conference, follow-up action is needed to enable them gain access to the Conference Report and the Harare Declaration so that they make take appropriate action. It is expected that some Governments may wish to individually make similar commitments. MDP undertakes to send to all governments that had been invited the workshop proceedings report together with the Harare Declaration on Urban Agriculture. Follow-up action is also required to sensitize funding agencies and development partners on the need to support this sector. What follows is a detailed report on the Ministers Conference.

I would like to thank the ministers and other heads of delegations for accepting our invitation and for the significant contributions they made during discussions. I would also like to thank those who provided funds that made this workshop possible – UNDP, UNICEF, IDRC, RUAF, and FAOSAFR. A big thank you also goes to those who prepared and presented thematic papers to the workshop.

Lastly I would like to thank the host minister, Honourable Dr Ignatious Chombo for inviting his colleagues and assisting with the organization of the workshop.

Mr. George Matovu
Regional Director, MDPESA

Conference In Pictures

CONFERENCE PROCEEDINGS

Background Information on the Conference

In a Ministers' Conference Concept Paper prepared and circulated by The Municipal Development Partnership for Eastern and Southern Africa (MDP-ESA), it was acknowledged that urbanization is one of the major challenges for mankind. The paper noted that urbanization rates for Eastern and Southern Africa fall in the 3-8% per annum range with the average rate for Sub-Saharan Africa being put at 5% and by 2020 the region will have attained a 50% urbanization rate. The paper further noted that the phenomenon of urban poverty is escalating and the proportion of the poor living in cities grew from 25% in 1988 to 56% by 2000. The rapid urbanization has therefore occurred at the same time as the growth in urban poverty amid food production constraints in rural agriculture, which sector (rural agriculture) is increasingly failing to provide adequate food supplies for cities. Within cities themselves there is considerable competition for resources between the different urban land-uses i.e. residential, industrial, commercial on the one hand and urban agricultural activities on the other.

The rural and urban food crisis is also exacerbated by the HIV/AIDS pandemic. The number of orphaned and other categories of vulnerable children is increasing with the bulk being looked after by grandparents with little means at their disposal. Essentially therefore, the paper argued that the mixture of extreme hunger and poverty amid shortcomings in agriculture, health, sanitation and institutional capacity painted a bleak picture for the future unless urgent investment in agriculture was made. The two-day conference was convened to secure support for Urban and peri-urban Agriculture from the respective governments in the region. It also sought to facilitate the development of a broader understanding of the role of UPA in food security and poverty reduction as well as in overall economic development.

This report captures the proceedings of the two-day conference.

Welcome Remarks

In his welcome and introductory remarks, The Permanent Secretary for Local Government, Public Works and National Housing, Government of Zimbabwe, Dr. Vincent Hungwe, acknowledged the support extended towards the hosting of the conference. He proceeded to recognize the delegations from the five Eastern and Southern African countries represented at the conference namely Kenya, Malawi, Tanzania, Swaziland and Zimbabwe. The delegates included the Ministers of Local Government from Swaziland and Zimbabwe, Deputy Ministers of Local Government from Malawi and Tanzania, The Permanent Secretary in the Ministry of Local Government in Zimbabwe and the Chief Legal Advisor and the Coordinator of Local Government Reforms in the Ministry of Local Government in Kenya, the Secretary

General of the Africa Union of Local Authorities, the Regional Directors of MDP and IUCN, the Executive Director of Food Agriculture Natural Resources Policy Analysis Network, the Assistant Representative for the UN Food and Agriculture Organization, the Regional Coordinator of Urban Harvest. Note that a full list of conference delegates is attached as an appendix.

Conference Objectives.

The principal thrust of the conference was to enable Ministers responsible for urban development in Eastern and Southern Africa to share ideas and experiences on UPA as a basis for distilling the key issues around which to develop a policy agenda for action. The more specific objectives of the conference were outlined and expanded upon by Dr. Hungwe as follows;

- ***Facilitating the sharing of experiences on UPA amongst the participating countries***. This was in view of the fact each of the countries is going through its own unique experiences and responds differently on the basis of national level stakeholders' perceptions of the issues. In this respect, the uniqueness of individual country experiences were to be used in identifying the common threads that will then feed into the development of a holistic, coherent and consistent policy regime and program of action on UPA.

- ***Coming up with strategies to enhance urban food security, nutrition and local economic growth and development through intensive high value UPA activities***. This objective took into consideration the importance of UPA as a source of nutrition and the kind of economic opportunities that the activity presents.

- ***Discussing the potential of urban agriculture as a strategy for improving access to food and the nutritional status of those affected by HIV/AIDS.*** This objective recognized that HIV/AIDS is a social, economic and political issue, and that food security is a crosscutting theme. Urban Agriculture could therefore be used to provide nutrition to the needs of HIV AIDS sufferers.

- ***Identifying key policy issues for urban agriculture in the region***. The policy and legislative environment in the region largely remain insensitive to the needs and demands of UPA persistently focusing on traditional urban land uses. This objective therefore sought to identify relevant issues in relation to how urban centers are managed and the extent to which the policy and legislative frameworks integrate UPA as a land-use option.

- ***Formulating a regional development program on UPA focusing on the technical, financial and legal institutional aspects and support.***

Expected Outcomes, Outputs and Impact of the Conference.

Dr V. Hungwe went on to present the expected outcomes, outputs and the impact of the conference, prefixing his presentation by reminding delegates that UPA has traditionally been conceived of as non-urban (rural) land use whose claims to urban land, water and other resources have been subordinated to those of other land uses. The principal outcomes of the conference were highlighted as follows;

- Shared experiences to be captured in the report of proceedings.
- A program to be implemented in the region (in the whole region and at country level).
- A task force to oversee to monitor the implementation of the program.
- Urban environmental sustainability in its widest sense.

The output of the conference was cited as a statement of commitment to support UPA. The statement would be act as a framework to individual countries in the region on the development of programme on urban agriculture.

Overall the expected impact of the conference was highlighted in relation to increased access to land, water and credit arising from more focused policy, legislative and institutional arrangements as well as infrastructure geared towards UPA.

Conference Methodology.

The conference was structured around presentation of papers, followed by reactions and active discussions. The discussions flowed from questions for clarification, request for additional information through to distilling country-specific as well as broader challenges around which each of the presentations sought support pursuant to the effective management of UPA. Sessions were chaired on a rotational basis with all discussions being in plenary. There were no breakaway group discussions except on day two when a technical team responsible for drafting the declaration was established. The technical team, made up of representatives of the participating countries, workshop facilitator and the two, rapporteurs was put into place on the first day of the workshop and worked through to the second day. The draft declaration was then presented in plenary for further discussion and refinement.

Opening Remarks by the Regional Director of MDP.

Mr. G. Matovu, the Municipal Development Partnership (MDP) Regional Director, then gave his welcome remarks. He started by thanking the chief Guest, Minister of Special Affairs in the Office of the President and Cabinet, Honorable Minister J. L. Nkomo for accepting the invitation to come and officially open the conference. He also thanked and welcomed the ministers and their delegations, and the other

delegates. The Regional Director gave a brief history of the Municipal Development Partnership and emphasized that the mission of the organization was centered on "promoting and supporting processes of decentralization, and enhancing the capacity of local governments in Sub-Saharan Africa"

Mr. Matovu also reiterated that the main purpose of the conference was to facilitate the sharing of ideas and experiences on UPA as well as developing a policy agenda for action. This was cognizant of the fact that UPA was increasingly becoming important for the attainment of food security by the urban population. The conference was therefore important in that it sought (and actually provided) space for Ministers and their delegations to share ideas and perspectives pertinent to the process of clearly thinking through a policy agenda for UPA. This thus enabled the garnering of political support for UPA from the Ministers present and their delegations.

Mr. Matovu paid special tribute to the partnership that made the Ministers Conference possible, by providing support in various forms. He said the conference was organized by the Ministry of Local Government, Public Works and National Housing, Government of Zimbabwe and the Municipal Development Partnership for Eastern and Southern Africa, in partnership with The Food, Agriculture and Natural Resources Policy Analysis Network [FANRPAN], The Food and Agriculture Organization – Regional Office for Southern Africa [FAO-SAFR] and The Resource Center on Urban Agriculture and Forestry, The Netherlands [RUAF]. The partners that provided funding were presented as UNDP, UNICEF and IDRC-CFP.

The Regional Director also reminded the participants that although UPA has many positive impacts that included food security, waste and nutrient recycling, employment creation and the associated incomes, it presented its own challenges in terms of environmental impacts, public health, aesthetics and security. He also emphasized that UPA was growing in terms of importance as it was estimated that the number of people depending partly on food from UPA in six Eastern and Southern African countries would rise from about 25 million in 2002 to 40 million by 2020. He also outlined the main objectives of MDP, Urban Agricultural Program and gave a brief account of the initiatives that have been undertaken so far to facilitate discussion towards the integration of UPA into urban development planning and management. He highlighted that the MDP activities have been principally aimed at increasing stakeholder participation, sharing/dissemination of experiences and contributing to the growing body of knowledge on the subject. The Director noted that MDP-ESA has been able to undertake the following;

- Information, communication and training needs assessments in Botswana, Malawi, Zambia and Zimbabwe.
- Pursue a Peri-Urban Land Tenure Planning and regularization study in Kenya, Malawi, Zimbabwe and Uganda, and

- The Political Economy of UPA in Kenya, Tanzania, Zimbabwe, Zambia and Uganda.

The key outputs from the knowledge generation activities were given as the production of a resource guide on Urban Agriculture, holding of training seminars on urban agriculture, establishment of stakeholder forums for urban agriculture in Botswana, Zambia and Zimbabwe, development of databases on urban agriculture in the region and the production of urban agriculture case studies. He ended by urging the Ministers, their delegation and all other participants to have fruitful deliberations that would come up with guided frameworks for mainstreaming urban agriculture into urban economies, management and development.

Welcome Remarks by Honorable Dr. Ignatius Chombo (Minister of Local Government, Public Works and National Housing, Zimbabwe)

Due to a clash of commitments the Minister was unable to attend the opening session of the conference. His Deputy, Chief Fortune Charumbira gave the welcome remarks on his behalf. He stated that his Ministry felt honored by the fact that it was hosting the two-day conference, which was expected to discuss and lay the framework for integrating UPA into the development strategies of the region. He encouraged delegates to diligently interrogate the issues mindful of the increasing poverty, which invariably forces most urban dwellers to engage in UPA activities. He also made reference to the devastating HIV/AIDS pandemic in most of the urban centers in the region and further acknowledged that more and more households were turning to UPA for the purposes of supplementing household incomes and food supplies.

The Minister also noted that the participants should not lose sight of the negative environmental impacts associated with UPA. Given that there were high population concentrations in urban centers, the possibility of contamination of urban agriculture produce was quite real. Urban livestock production and the discharge of industrial effluent were also identified as environmental and public health risks associated with UPA.

He further urged the participants not to engage in academic discussions but to concentrate on the practical experiences that obtain in the region and facilitate the search for practical and strategic reasons. This would enhance the support by UPA towards the reduction of urban food insecurity and promote local development. The Minister also made it clear his conviction that UPA was a legitimate practice which ought to be organized, coordinated and managed in a sustainable manner.

In conclusion, the Minister called for an approach, which provided for the comparison of the economic benefits and costs that come up with the different competitive land-uses in an urban context. This, the Minister argued, would allow the

best utilization of the available land resources. The Minister then introduced the Guest of Honor, Honorable J. L. Nkomo, Minister of Special Affairs in the Office of the President and Cabinet, Zimbabwe.

Official Opening by Honorable J. L. Nkomo (Minister of Special Affairs in the Office of the President and Cabinet, Zimbabwe)

Honorable J. L. Nkomo started by highlighting that this particular conference reminded him of the 1999 Conference of Ministers of Local Government which was held in Victoria Falls. The Ministers met and discussed the theme: Challenges Facing Governments in Africa. That particular conference identified poverty as one of the major challenges and given that urbanization was accelerating in most countries in the region, urban poverty was noted as one of the biggest challenges confronting urban populations. Noting that urban centers in sub-Saran Africa were growing at a rate of 5% per annum, the Minister said it was estimated that about half of the population would be in urban centers by the year 2020. He further noted that urbanization needed robust management processes, which had to be found against economic constraints with economic growth rates far surpassed by urbanization rates. He therefore acknowledged the conference's search for strategies to poverty alleviation and improved food security, through the promotion of UPA.

The Minister remarked that rural production alone could not secure national food security. The cost of producing food was on the increase and so was the cost of transporting food from rural homes to the urban areas and hence the importance of urban agriculture in promoting food security. The Minister made reference to the meeting of the Ministers of Agriculture, which was held in Malawi sometime this year. The Minister said that it was disheartening to note that only South Africa reported that it had a food surplus with the rest of SADC reporting huge deficits. At that meeting, there was a reaffirmation of the importance of land and agriculture in African economies. The Minister then revealed that the challenges of feeding cities required investment in food production, processing and marketing, which he noted were very important aspects in discussing urban agriculture. The Minister also reinforced the point that the food crisis existed in both urban and rural communities and proceeded to note that studies carried out show that over 4.2 million children in the region have been orphaned and it is therefore important that the role of UPA in augmenting urban food supply and complementing rural production be considered as a priority policy issue. He concluded his official opening speech by expressing the hope that the outcome of the conference would result in a conducive policy environment supportive of UPA.

Keynote Address on The Impacts of Urban Agriculture and Prospects for its Growth in Eastern and Southern Africa – By Dr Tobias Takavarasha

The conference objectives and opening remarks were followed by a presentation of a keynote address by The Executive Director of The Food, Agriculture and Natural Resources Policy Analysis Network (FANRPAN), Dr. Tobias Takavarasha. In a paper, entitled ***Impacts of Urban Agriculture, Integration into Urban Development and Prospects for Growth in Eastern and Southern Africa***, Dr. Takavarasha provided the broad context within which the subject of UPA was going to be discussed at the conference. The full version of the paper presented is in this report as Annex … Dr Takavarasha started his presentation by outlining the objectives of his organization before proceeding to outline one of FANRPAN's major research initiatives focusing on informing proactive responses to food security and nutritional needs of people suffering from HIV/AIDS as well as assessing the broader impacts of the disease on the food, agriculture and natural resource sector.

The presentation defined UPA in relation to activities located within and on the fringes of a town, city or metropolis involving the growing or raising as well as the distribution of a diversity of food and non-food agricultural products using human and material resources, material and services from within or around that city, town or metropolis. The basic types of UPA that the presenter anchored his discussion on included vegetable production, backyard or on-plot gardening, school gardens, agro-forestry activities and fruit trees, potted plants and urban nurseries, the raising of various species of livestock as well as food crops. His definition of UPA emphasized the issue of boundary to obviate the problems of mistaking rural agricultural products that find their way into the city being accounted for as UPA produce. Dr. Takavarasha explained some of the main reasons why urban households engaged in urban agriculture. The reasons were as follows;

- The desire by households to produce food for subsistence and enhancement of incomes.
- The opportunities presented by the ready urban markets.
- The 'availability' of land, which resulted in a significant number of urban households engaging in UPA.
- The high prices of marketed food in urban centers have also forced urban households to turn UPA as a response to the economic hardships.
- Also there are city inhabitants who practice farming as a hobby because of their cultural tastes or ways of life.

Dr. Takavarasha also discussed the major constraints that UPA faces as well as the perceived and actual problems that the activity is associated with, which require

careful untangling if the activity is to be properly provided for and better managed. These included the following;

- The limited availability of and access to arable land in an urban context.
- The question of insecure land tenure rights, which also give rise to various forms of conflicts.
- Policies and regulations that are not supportive (and in fact prohibitive) of UPA.
- Lack of support services and productive inputs for urban farmers.
- Lack of organization amongst urban farmers making it difficult for them to champion their cause.
- Perceived and real environmental impacts of UPA also worsened the case for UPA. He further highlighted the health and environmental risks related to UPA. The inappropriate handling of agro-chemicals by producers and the disposal of wastes from crops and livestock were identified as the main source of the health and environmental problems.
- Lack of adequate knowledge on crop selection, location and their implications on air, water and soil pollution. In some situations, UPA resulted in obvious deforestation and soil erosion.

He ended his presentation by highlighting some of the policy perspectives for UPA arguing that there is need to provide proper land allotments for the practice of UPA as well as instituting mechanisms for prevention and management of conflicts. He challenged city planners to start making provisions that promote UPA as well as giving due attention to the provision of extension services. Dr. Takavarasha also argued that special or disadvantaged groups (e.g. HIV/AIDS sufferers) and the gender and youth dimensions of UPA need to be provided for in policy. At the same time, measures were required to address the negative health and environmental effects associated with UPA. The importance of accurate statistics on production, nature, extent and other variables pertinent to policy formulation on UPA was also highlighted.

The full version of this paper is presented as Annex 1 of this report.

Discussion

The paper raised very important issues, with delegates subsequently amplifying the following points;

- UPA cannot be wished away as it has taken root and has become a common feature of the city/urban land-use and socio-economic system. Given the diversity of parcels of land on which UPA is practiced from city parks to roof tops and the farmers themselves the notion that urban farmers need to be encouraged to leave the city appears to be limiting and inoperable. As one delegate put it, like gold panning in Zimbabwe, which although illegal is

commonplace, UPA needs to be better managed rather than removed from the cityscape.

- City managers and urban farmers held entrenched and dichotomous views based on competing rationalities and without any convergence of views. Delegates affirmed that there is a compelling need to facilitate the narrowing of the gap through bringing the two parties together so that constructive dialogue can be initiated.
- The need to balance the resource needs of UPA on the one hand and those of other urban land uses on the other given the rapid urbanization.
- It was also questioned why people are interested in practicing UPA when there is a lot of under-utilized land in areas outside cities. Delegates called for deeper understanding of the practice if proper targeting is to be possible.
- Another point raised was the use of wastewater without proper management. For example, it was noted that in Nairobi, Kenya, raw sewage was being used to irrigate crops in some areas. The participants therefore argued that there was need for a technological and institutional response to this problem based on more analysis, evidence and information on the linkage between UPA and waste management. One delegate noted that UPA uses urban waste in a creative way and given that up to 70% of urban household waste is biodegradable ways could be found to address the soil fertility challenge.
- Policies managing UPA were noted to be both conflictual on occasion e.g. some land and local government legislation and that invariably they are inadequately equipped to address the needs of the poor as far as UPA is concerned.
- Institutional coordination at public, private sector and other stakeholders was also identified as a major cause of concern.

An overarching question that engaged delegates was the whole issue of defining the nature of the modern African city. Was this to be based on Western planning systems that were operational in most countries, which bordered on criminalizing UPA or was the modern African city to be based on a robust integration of UPA in view of the fact that this is what the African city dweller is actively (in defiance of existing policies) demanding? In this connection delegates further observed that African city planners misunderstood and lacked clear knowledge on the adopted Western planning ideology as most cities in the developed world had garden allotments, yet our city planners refuse to provide for the same in our own countries. Perhaps it was time 'classical urban design' theories were adapted if not discarded.

Country Presentations

This section of the report captures the presentations by the five country delegations to the conference. The presentations focused on national experiences in managing the spread of UPA, the policy-legislative and institutional arrangements and in broad

terms the processes underway in relation to recognizing and providing for UPA in urban design, development and management. Each of the countries represented at the conference is at a different stage of responding to the demands of UPA.

Urban Agriculture in the Republic of Kenya – Presented by Millicah Thairu & Francisca Maina.

The Senior Legal Advisor and the Coordinator of the Local Government Reform Program, respectively Madam Thairu and Madam Maina jointly presented the Kenyan paper. The presentation started by giving the background information on Kenya. Of the country's 30.8 million people, 10 million of these reside in the urban areas with 3 million of these resident in Nairobi. The national annual population growth rate of Kenya was 2.6% whilst the annual urban population growth rate was 5%. The country has 175 local authorities with one of these being a City Council, 47 Municipal councils (four of these were in the process of assuming city status, 60 town councils and 67 country councils. Agriculture provides income and employment to about 80% of the population, particularly those in the rural areas.

Urban and Peri-Urban Agriculture (UPA) exists in the country and local authority areas like Thika are examples of self-sufficient urban areas in this case in milk and poultry products. However UPA is not fully integrated into the planning and development frameworks and hence, despite the enterprising activities of the farmers, they are often harassed by city managers. Ongoing research has shown that quite a diversified range of crops is produced in the country's main urban areas including cereals, root crops, vegetables, legumes and various livestock products. The paper reveals that UPA is slowly gaining recognition at the local government levels. The paper also notes that in Kitui and parts of Nairobi, more work is required to integrate UPA in the local economies.

The paper also noted that there are ongoing local government reforms in the country. These reforms were towards the attainment of efficiency, accountability, transparency and citizen ownership in order to improve local services delivery, enhance economic governance and alleviate poverty. Decentralization through devolution was identified as the core of the local government reforms. The paper also highlighted some of the ongoing initiatives that have a direct relevance to UPA or can offer exciting examples. For example, the paper mentioned that there are several social integration programs including the street families rehabilitation program which has about 250 000 children in the program, the free primary education program. A fund known as the Housing and Infrastructure Fund (KENSUF) also finances slum upgrading, low cost housing for and other related infrastructure. There were also HIV/AIDS campaigns, which enjoyed the highest political support and health programs.

In Kenya current urban management initiatives were focusing on urban development policy formulation, environmental management, greening of the city, landscaping and beautification of urban areas as well as promoting urban safety. The paper acknowledged that there is a growing awareness of the importance of urban agriculture by various actors, in relation to its potential towards urban food production and establishment of safety nets. Given the widespread poverty and high incidence of HIV/AIDS affecting most economies, the paper proposed that UPA development should provide an avenue for nutritional safety nets for urban populations, small landholders and the landless.

In terms of the way forward, the paper called for more research on UPA whose results will be disseminated to policy makers and other key gatekeepers, particularly focusing on the role of UPA in local economic development. Further, the paper highlighted the importance of sharing UPA experiences at local, regional and international levels, with special attention on the documentation and sharing of best practices. Also important is the integration of urban agriculture in national and local level policy frameworks, together with the promotion of an enabling legislative and regularly framework especially at theological government levels. On matters of policy, the paper challenged urban practitioners to lobby policy makers at local and central government levels with regard to UPA issues providing adequate and policy relevant information.

Local authorities and other stakeholders were also urged to facilitate the provision of supporting infrastructure to people engaged in UPA. For UPA to garner more political mileage, the paper argued that UPA should target disadvantaged social groups that include HIV/AIDS sufferers and care givers. The paper concluded by acknowledging that the African city derives its character from the basic livelihoods of its populace and hence it was inevitable that they should provide for UPA.

Annex 2 presents a summary of the points from the presentation.

Discussion

During discussions, the perception that crops like maize and bananas increase accident risks at traffic intersections and further aid the commitment of crimes as compared to low crops like groundnuts and beans was interrogated. Participants also urged that proponents of UPA should have answers ready in response to such situations. A question was also asked on the extent to which the policy formulation processes were (already and/or going to) consultative and inclusive of those who needed urban agriculture. In response the presenter stated that the process of consultation has been institutionalized in law and hence it was mandatory to go through participatory development planning. The drawback was however that there was no special category created for urban farmers and therefore their participation

was only as city residents. Reference was also made to the negative environmental impacts of UPA especially UPA related flash flooding and soil erosion which was contributing to the deterioration of roads. Silt deposits were leading to the clogging of drainage pipes and the roads were always flooded whenever it rains.

Urban Agriculture in the Republic of Malawi, Presented by Hon. Henry Midiani.

The Deputy Minister for Local Government, Mr. Midiani made the presentation and started by observing that UPA is a growing activity in the country although statistics were not readily available. He also noted that there was no explicit policy on UPA in Malawi. The country's urban population growth rate stands at 6.3% and that this was the highest in Africa. This challenge culminates in problems of food insecurity, lack of income or viable income generating opportunities, lack of productive assets, poor health, poor housing, etc. The paper then asks the pertinent question: Can the imbalances in the food production systems that are arising from the high urbanization rate be reversed through promotion of UPA?

The paper highlighted that there are 40 Local Authorities in Malawi, which can be split into one municipality, eight towns, three cities and twenty-eight district committees. The paper further described briefly the decentralization and local government reform processes and experiences in Malawi observing that during the single party era (Banda's rule) functions of local authorities were stripped from them and transferred to line Ministries.

In Malawi, urban agriculture is characterized by the production of cereals, fruits, vegetables, flowers, ornamentals and mushrooms. On the animal production side, there are cattle, pigs, goats, rabbits, poultry and guinea fowls. The paper stated that urban agriculture in Malawi is also characterized by small scale or backyard agro-activities, on the one hand and large-scale activities associated with commercial enterprises like poultry production, dairy farming and flori-culture. The paper also observed that those in the medium to high-income categories tend to rent gardens or farms, which are on the periphery of urban areas where maize production is, the key activity. The poor and the low-income groups often established their gardens along river valleys and hill slopes, and many of 'the farms' are open city spaces. From the policy perspective, the paper stated that urban agriculture in Malawi, especially crop production, was a banned activity until the mid 1980s. After the lifting of the ban, many activities flourished. However, the development of enabling policy framework was hindered by the dual land administration system made up of the city authorities and the Department of Lands. The paper also noted that there is no organized provision of support services that include extension to urban farmers.

It is interesting to note that in Malawi, only Lilongwe, the capital city has its zoning scheme of the mid-1980s, which is accommodative of UPA activities. The first agricultural show of Lilongwe was held in 2002 and this paraded agro-activities in the city and also encouraged citizens to utilize the open spaces provided for agriculture activities. Since 2002, the paper observed that NGOs have become actively involved in UPA, particularly in terms of offering small loans for agricultural inputs (fertilizers, seeds and treadle pumps), focusing on the urban poor. The paper also revealed that the HIV/AIDS pandemic has wrecked havoc in Malawi, leading to an increase in the problem of orphans. Widows have particularly responded to the challenge through the tilling of gardens for growing crops. UPA in Malawi faces most of the common challenges that are found in other countries. The paper summarized the problems as including:

- Lack of appropriate by-laws to regulate and control UPA
- Limited or no access to land for the poor
- Non-availability of extension services
- Odours from animal waste is both unpleasant and unhealthy
- Competition for available land by the different alternative land-uses
- Limited water availability which generally makes crop production possible deriving the rainy season
- There is a general lack of scientific information on the state of UPA

Regarding policy frameworks, Malawi's decentralization policy and The Local Government Act provide a framework for the development of UPA. Local authorities have been given some mandate to provide for UPA and with more devolution local authorities will be better placed in promoting UPA. The future for UPA in Malawi appears to be brighter than in other countries.

Discussion

During discussions the high levels of poverty in most of ESA cities was highlighted. As a result, delegates noted that it was necessary to develop a targeting process that would ensure the real poor are reached in terms of any public sector support to UPA especially regarding provision of land and other support services. The process of coming up with Poverty Reduction Strategy Papers (PSRP) that is underway in Malawi was identified as an influencing opportunity for the integration of UPA in the country's national and local development strategies.

The Kingdom of Swaziland, Presented by Hon. Albert Shabangu.

Mr. Shabangu, who is the Minister of Local Government in Swaziland presented his country's experiences. He started with an acknowledgement that UPA is not yet a

formally recognized urban activity. The presentation was also made clearer through the use of case studies.

The presentation of the three case studies clearly demonstrated that to the Ministry in particular and to government both local and central in general, managing and providing for UPA were new experiences. However, the Minister and his team have acknowledged the inevitably entrenched position of UPA in Swazi cities.

The Minister reasoned that as **'a coup de tat is only treasonous until it succeeds' the fact that UPA has succeeded in laying a claim to urban land means that it should no longer be treated as 'alien' to city planning and management.** UPA has validated itself as a permanent land use and in essence needs to be recognized as a valid land-use.

The first case study, inter-alia, reflected the power of direct lobbying as well as the use of practical experiences to demonstrate the value of UPA activities, which lures political support. The Lavumisa case study also demonstrates the local (and potentially national) development potential of UPA activities as well as the poverty reduction benefits. On the other hand the request put through by AMICAAL explores in a practical way the strategic food security linkages between UPA on the one hand and broader social welfare and safety nets in a city context. Given the proven scope for and increasing preference for community or home-based care options with regard to HIV/AIDS and caring for the elderly, orphaned and vulnerable children and other categories of disadvantaged, UPA lends itself as critical poverty alleviation strategy. Sub-issues of land availability, crop choice and location come into play and Swaziland is grappling with these.

The Minister also noted the importance of being flexible and adopting a learning process approach in as far as dealing with UPA issues is concerned. He shared his commitment to getting things done and done differently than hitherto including ensuring that urban planning and other city managers are sensitized and capacity built at the same time that urban farmers are actively engaged in policy formulation. The Minister concluded his presentation by outlining a series of action points that are required in promoting UPA, including:

- A clear definition of UPA and specification of the typologies that may be allowed in an urban area
- Incorporation of UPA in town planning zones and revision of appropriate legal instruments.
- Establishment of an institutional framework for regulating and monitoring the activity
- Definition of beneficiaries of UPA (as groups, individuals, etc)
- Lobbying for political support
- Sharing of information on best practices.

- Making provision of micro-finance to support the activity and provision of extension services.

Box 1 - Case Studies from Swaziland.

a) An association/cooperative in a small Swazi town on the border with South Africa called Lavumisa approached the Minister of Local Government with a request for additional land onto which to expand their existing piggery, sugarcane and an assortment of other agro-activities. The current and proposed activities are not provided for in the existing legislation and regulations i.e. the activities are prohibited. The association therefore sought both more land and tacit regularization of their activities. The land being targeted for expansion is state/public land and not earmarked for any immediate use. The Minister has been to the area once, was well received and saw the extent to which the existing and proposed activities hold promise both in terms employment generation and local economic development notwithstanding feeding the participating households. The visit to the group was a new experience to the Minister, which generated new insights forced the Minister to increasingly become more sympathetic. He undertook to look into the request differently upon return to Swaziland in collaboration with his Ministry of Lands and Cooperatives, with whom he has had contact on the issue since legally cooperatives fall under the Lands Ministry although their activities are in an urban setting and the land they requested falls under the Local Government portfolio.
b) The second case is a direct appeal by AMICAAL for land for UPA activities in support of HIV/AIDS sufferers' food/nutritional and financial needs.
c) The third case is whereby the Ministry is proposing that a Local Authority (Pig Speak) expands its residential areas into a nearby forest, which unfortunately threatens the livelihoods of a number of people as they get lots of money from lumbering. Seeking alternative land for Pigs Peak's expansion inevitably leaves agro-forestry land-uses within the 'city limits'.

Source; Minister of Local Government, Hon Shabangu, Kingdom of Swaziland.

- Defining secure land tenure rights for various categories of urban farmers
- Encouraging personal re-education and transformation of the national and local government officials
- Holding of follow-up workshops that target urban farmers.

Full presentation is given in Appendix 4

Discussion

During the discussions, delegates reiterated the importance of another conference with urban farmers as the key stakeholders. This would provide them with the chance to articulate their views as well as presenting an opportunity for delegates to directly hear the urban farmers' on the increasing scale of UPA and its rationality

from farmers' perspectives. The only urban farmer at the conference who bravely declared, **"Urban Farmers were here to stay and spreading like SARS"**, reinforced this view. The farmer further reinforced farmers' willingness to respond to new ideas that would help improve productivity and environmental management.

Urban Agriculture in The United Republic of Tanzania – Presented by Hon. Mizengo Pinda.

Hon. Pinda, who is the Deputy Minister for Regional Administration and Local Government made the presentation for Tanzania and started by giving the background information in the country. It stated that Tanzania has about 34.6 million people and has 20 major urban centers with population ranging from 41 500 to 1.1 million inhabitants.

The country is one of the few countries that had clear policies and legislation that regulate and are supportive of UPA. These include the Agricultural and Livestock Policy of 1997, Urban Farming Regulations of 1992 and the National Human Settlements Development Policy of 2002. However, previous urban land-use plans did not provide for urban agriculture. Current planning approach is through the Environmental Planning and Management (EPM) Process.

There are also ongoing reforms, which are aimed at promoting decentralization for increased participation and local accountability. The paper also observed that UPA was widespread in most urban centers in the country. Cities like Dar es Salaam produced 50 000 and 60 000 tones of leafy vegetables annually. Production is mainly through simple farming methods that include the bottle and bucket irrigation. Livestock is reared based on the zero grazing, which relies on cut and carry-feeding management.

Most of the UPA produce finds its way to the market. The paper argued that there are four main outlets for the produce and these include wholesales in main markets, farm gates, makeshift roadside stalls and neighborhood markets. In terms of livestock production, the paper observed that artificial insemination is widely used further noting that livestock manure is commonly used for horticultural production whilst inorganic manure is mainly used in commercial vegetable production sites. Agricultural production is mostly dependant on surface water, as tap water is considered expensive.

Tanzanian urban areas provide extension services mainly upon request and in Dar es Salaam the participatory extension approach is in use. Generally, access to land is constrained largely because of the current in situations where existing plans do not accommodate urban agriculture. In terms of who is involved in UPA in Tanzania, there is a highly diversified stratum that includes professionals, government bureaucrats, students, the unemployed and other categories of part-time and full-time workers. Generally, it is accepted that UPA is a survival strategy for the varied social classes.

The majority of full-time urban farmers are in the peri-urban areas whilst full-time intra-city agricultural production is mostly on open spaces ranging in size from 700 to 950m^2. Home gardening and livestock keeping is practiced on small size plots mainly as a supplementary activity. For the intra-city areas, land acquisition is done through informal means and there is higher insecurity of land tenure. This is in contrast with the peri-urban areas where land is secured through formal government leaseholds and also through customary tenure without much regard to planned uses.

Regarding farmer organizations, no formal group structures for the urban farmers exist but the paper noted that there are limited activities amongst the farmers, particularly among vegetable producers. The question of access to credit is generally problematic. The major constraints faced by UPA in Tanzania were identified as follows:

- Local government by-laws which limit the type and scope of agricultural activities in urban areas
- Limitations in land sizes for agricultural activities
- Inadequate extension services to urban farmers and training of urban planning practitioners.
- Lack of clear policies in productive use of urban open spaces.
- Sensitizing the media on UPA issues.
- Improving the organization of farmers and providing institutional support to the groups.

On the issue of supporting policies, the paper called for urban local authorities to train more of their extension staff, with a specialization in UPA. It also argues that the Ministry responsible for Land matters should restructure land access and land-use laws in a way that provides secure land tenure in intra-city areas. The paper also recommended that Urban Local Authorities should establish departments that coordinate and manage UPA issues.

This paper is presented as a full appendage in Annex 5.

Discussion

Tanzania was commended for having specific policy and legislative provisions supportive of UPA. Other countries were urged to emulate the Tanzanian example. A key issue that was raised during discussion related to the quality of water that was used to promote UA. It was observed that in some of the situations, the quality of water used to irrigate the crops made the produce a potential health hazard.

Tanzania has gone a long way in providing a clear legislative environment supportive of UPA from which other countries could learn. Further, other countries could also benefit from the living examples on the zoning of land for UPA. The link between urban agriculture and urban governance was also stressed since providing for UPA has been in direct response to demand from the urban farmers. In terms of the policy formulation process, the relationship between the key Ministries of Lands and Local Government was highlighted as working well providing for effective policies (spearheaded by the Lands Ministry) and implementation at local level (Ministry of Regional Administration and Local Government).

Urban Agriculture in the Republic of Zimbabwe – Presented by Dr. Vincent Hungwe

The Permanent Secretary for Local Government, Public Works and National Housing, Dr. Hungwe, made the presentation for Zimbabwe. He started by highlighting that UPA activities were not new to Zimbabwean urban areas as evidence from research shows that the practice has always been a feature of cities from as why as the 1950s. The cycle of city growth and expansion has naturally entailed furious competition between agricultural land-use on the one hand and residential, industrial and commercial land-uses on the other with the former (agricultural) traditionally giving way. He gave the example of Harare where 267 hectares were under urban agriculture in 1955 while by 1994 over 9000 hectares were under UPA.

Dr. Hungwe further explained that UPA is predominantly a household activity where food (vegetables etc) is grown under irrigation or as rain-fed crops for consumption or for marketing where surplus is realized. There are also cases where commercial farming activities are in evidence in some Zimbabwean cities on large residential properties zoned for UPA activities like vegetable growing, fruits, livestock and flower production. UPA normally takes the form of on-plot (mainly subsistence) and off-plot (both for subsistence and for marketing of produce).

He presented the three dimensions of UPA namely socio-economic, ecological and institutional were discussed. As a socio-economic activity, UPA has sub-components of employment, income generation and poverty reduction, which he observed as having gained momentum with the advent of the Economic Structural Adjustment Programs of the early 1990s. This coincided with an upswing in UPA activities in terms of numbers of people involved and the total area under UPA. In terns of the

ecological dimensions, Dr. Hungwe highlighted the mainly negative environmental effects associated with UPA. Dr. Hungwe also noted the increasing institutional interest in UPA in Zimbabwe. At government level virtually every Ministry has a role to play in UPA, he observed and outside government, NGOs, research institutions, private sector companies and the local authorities.

Off-plot agriculture, which has gathered pace over the years in terms of its prevalence and has generated anxiety for city managers, urban environmentalists, nutritionists, public health officials, researchers and other stakeholders. Off-plot UPA occurs on open spaces either reserved for future use or already designated as open spaces, on commercial or industrial land, along river banks, in dam catchment areas, on land left or designated as power utility, railway and/or road servitudes, on hills or other areas deemed unsuitable for residential or other land uses. As such off-plot UPA takes place on land that city managers and other urban stakeholders largely consider to be unsuitable.

Dr. Hungwe explained that the regulatory framework in Zimbabwe generally lacks a clear legislative instrument that explicitly supports or categorically prohibits UPA. On one hand, the Regional Town and Community Planning Act (RTCPA), section 22, subsection b, paragraph (iii) states that the use of urban land for agricultural purposes does not constitute land development. He emphasized the importance of noting that the Act essentially does not recognize UPA as an urban land use. This is why most planning professionals and other practitioners view urban agricultural activities as temporary land-uses i.e. uses engaged in while the "real" ones are still to be effected.

On the other hand, the Urban Councils Act of 1995 in section 235 (2j) gives the Responsible Minister (for Local Government) authority to formulate regulations to prohibit or regulate cultivation in local government areas. It further gives powers to local authorities to make their own by-laws, which however should not contravene the main act. Another piece of legislation, which he cited as relevant to and applied in regulating UPA is the Natural Resources Act of 1975 under which stream bank protection regulations, which prohibit cultivation within 30 meters of a stream.

The Water Act also forbids riverbed cultivation again for the same reasons of protecting the siltation of water systems. The current legislation in Zimbabwe recognizes the existence of UPA but the general slant is towards treating it as a nuisance that has to be prohibited or strictly regulated where permitted or tolerated. Notwithstanding the acknowledged income, food security and nutrition augmentation advantages deriving from UPA the activity has basically been viewed as an intrusive and undesirable pre-occupation. It is only because of its spread that a change in attitude has occurred with institutions traditionally readily disposed to

burn and ban beginning to deliberately search for ways to integrate and sustainably manage UPA as part of the urban economy.

While acknowledging the institutional complexity, which poses some coordination challenges, Dr. Hungwe highlighted that it was important not to loose sight of the general consensus that UPA cannot be ignored and that it is playing a critical socio-economic role in the urban economy.

He further observed that for stakeholders to develop effective policy, legislative and institutional processes could benefit from clarity and a shared conceptualization of UPA in the country. Three broad definitions were presented as follows;

- *ENDA; The production of crops and livestock by urban households for consumption and the urban market….it is an informal activity as most practitioners do not follow legal procedures in acquiring land.*
- *Mbiba (1995); The production of crops and/or livestock on land, which is administratively and legally zoned for urban uses.*
- *Smit etal; An industry that produces, processes and markets food largely in response to the daily demand of consumers within a town, city or metropolis on land and water dispersed throughout the urban and peri-urban area applying intensive production methods using and reusing natural resources and urban waste to yield a diversity of crops and livestock*

Dr. Hungwe observed that the first two definitions are informed by the legal territorial concern, which essentially flows from the perception that UPA is not a bonafide urban land-use. UPA is viewed as informal, illegal and temporary and policy formulation flowing from this premise does not easily lead to the granting of a status to UPA which allows for a full stake in relation to urban resources like land, water, finances, extension and technology development. On the other hand, the third definition accords UPA, an industry status, removes the illegalities that have traditionally haunted UPA. Policy and legislative reviews flowing from this conceptualization of UPA will enable urban planners, city managers and other stakeholders to seek and apply a robust urban design and management system, which integrates UPA.

He concluded his presentation by highlighting some of the critical emerging policy issues for Zimbabwe as follows;

- The need for consensus in terms of the nature, scope, purpose and place of UPA in national economic development, which relates to the conceptualisation or definition of UPA.
- The need to capture the momentum arising from the emerging consensus on the need to recognize and integrate UPA into the planning and design of the urban economy (harmonization of policies and enabling legislation that

provides a framework for formulation of by-laws and UPA practice by local authorities).

- Identifying and harmonizing instruments in support of UPA; extension, environmental management, financial support, water management and issues of tenure security.
- Taking account of the needs of UPA in the ongoing national agrarian reform.
- Environmental implications
- Increasing access for the poor, HIV/AIDS affected

A key recommendation he made was that there is need to create space for agriculture as a legitimate land use as well as recognizing land use intensity.

The full text of Dr. Hungwe's notes are presented as Annex 6 of this report.

Discussion

Several important points were raised during discussions. For example, a concern raised was that the issue of access to credit was being continuously excluded. Participants were then urged to integrate access to credit issues in the conference proceedings. It was also noted that the institutional framework responsible for UPA was potentially conflicting. This fear was partly allayed when it was stressed that it was the local authorities that had been given the authority to plan and implement UA.

Another interesting point raised was that UA was very popular with public institutions that include army barracks, police camps and prison camps. This was considered very positive and increased publicity of such examples might help uplift the cause of UA. A point of interest was also that Fambidzanayi Permaculture Centre, together with the Government of Zimbabwe, were working on joint project on the production of organic fertilizers. If successful, participants felt that such an initiative would need to be publicized especially among UA farmers, as this would help reduce the pollution of water resources from the use inorganic fertilizers.

Other key issues that arose from the plenary feedback were in relation to;

- The need for sensitivity and training for urban local authority practitioners so that they are able to deal with and provide for the activity on the daily activities.
- The role of the media in disseminating information on UPA as well as hosting national debate on the subject was also raised.
- Ensuring that people benefit from ongoing research and experiences from other countries.
- Demystifying UPA, dignifying urban farmers and getting urban farmers more organized for more effective engagement and service provision e.g. training.

Thematic Presentations

Urban Agriculture And Urban Environmental Challenge In Zimbabwe. By Crispen Maseva

Mr. Maseva who works with the Department of Natural Resources in the Ministry of Environment and Tourism, Government of Zimbabwe made the presentation on UPA and the urban environmental challenge in Zimbabwe. He said urban areas face considerable environmental management challenges associated with the disposal, treatment of residential, industrial and commercial waste, as well as broader protection of the natural environment within and around the built-up areas. This challenge exists with or without the practice of urban and peri-urban agriculture. However, the increasing scope of UPA in terms of the diversity of activities undertaken and the coverage of areas where these activities are pursued has compounded the urban environmental challenge.

City managers and other have tended to view UPA as a serious threat to the sustainability of other attributing significant environmental problems to UPA. As a result of this perception UPA the official response has been one of strict regulation, qualified acceptance or tolerance as well as active discouragement and prohibition including the destruction of crops grown on urban land. This is the general background within which UPA is practiced and often analyzed.

He cited a number of urban environmental problems that are attributed to UPA including the following:

- Deforestation of the urban natural vegetation
- Destruction of or contribution to loss of bio-diversity
- Encroachment onto wetlands and other environmentally sensitive areas prone to rapid degradation. For instance, 40% of UPA activities in Harare are practiced on land unsuitable for crop farming (wetlands, sloppy areas, river banks, river beds, etc)
- Cultivation on sloppy areas which exacerbate soil loss
- Adverse effects associated with uncontrolled and often inappropriate use of agro-chemicals leading to soil, air and water pollution
- Loss of urban aesthetics especially where UPA is undertaken on open spaces abutting roads or on municipal parks, which lie bare for a greater part of the year, where seasonal crops are grown on a rain fed basis.

With the growing acknowledgement of the permanency of UPA not necessarily in location specific terms but rather as a feature of the urban socio-economic fabric and landscape, official responses to and treatment of UPA have begun to noticeably shift. The shift is from strategies that are designed to exterminate UPA from the urban

economy to ones that seek to better manage and provide for it. This shift is a result of the realization that UPA is a complex activity befitting more robust treatment.

In the presentation, Mr. G. Maseva offered two broad strategies for dealing with the urban environmental problems associated with UPA, namely technical and non-technical solutions. The technical strategies, which he discussed included:

- Environmental Assessments (EAs) on a project-specific basis or as a strategic level (strategic environmental assessment). EAs will provide a basis for determining the environmental effects of different forms of UPA, their evaluation to develop strategies for eliminating or mitigating them as well as developing a continuous monitoring and management framework
- Resource inventorying and profiling to determine the resources available in a given city/town or wealthy thereof, the physical location and condition with a view to creating an environmental data base either manual or computerized Geographical or Land Information Systems (GIS/LIS) to enhance environmental management and the rationalization of open spaces within *or when area*
- Mechanical and biological conservation methods like terracing, contour ridges and grass e.g. vetiver mainly to stem soil movement
- Provision of (effective) extension services to enable the development of appropriate farming technologies and the transfer of appropriate farming skills to urban farmers. At present with little to no extensive support is being extended to the urban farmer in part because of UPA's perceived illegality

In terms of the non-technical strategies that could be employed to improve the environmental sustainability of UPA, Mr. Maseva presented the following:

- Policy and legislative reform to remove the illegality of UPA and thus pave the way for more effective responses and support mechanisms by both the public, private and NGO sectors
- Improving the organization of farmers into distinct and recognized groups to which extension and other relevant support services can be effectively deployed. Organized farmers are more accessible especially in policy formulation consultations. The other advantage flowing from organized farmers that the paper noted was that this would enhance efficient and responsible utilization of the land and other resources.
- Engaging farmers in participatory planning processes to identify their needs with respect to the UPA activities they undertake and the environment in which they undertake these activities. The analysis of their needs and the environmental risks associated with specific faming environments will enable them to develop suitable action plans for implementing agreed activities
- Promoting the institutional collaboration and coordination of the various stakeholders involved in UPA including urban local authorities, relevant

government departments, who are the private sector to reduce activity duplication and contradiction

- Mobilizing political support is also essential strategy for enhancing the environmental sustainability of UPA especially where drastic measures are required like in cases where UPA activities have to be relocated from one area to another on the basis of an EA.

The range of non-technical strategies outlined in Maseva's paper largely reflected the need for improving and re-focusing the policy, legislative and institutional arrangements to be able to support UPA both at the level of public and private institutions associated with UPA and that of the urban farmers themselves.

This paper is presented in full in Annex 7 of this report.

Discussion

Observations from plenary noted that crop production appears to have received more treatment in the discourse on the environmental problems associated with UPA as opposed to livestock production especially in SADC. Even with regard to crop production concern was raised that the negative environmental impacts of UPA have generally not been discussed, quantified or qualified with respect to specific UPA activities leading to blanket policy responses and by-laws. The EA processes suggested in Maseva's presentation (project specific and strategic) would help in resolving this concern.

An important point that city managers, other stakeholders and farmers needed to acknowledge was that UPA like any other economic activity has negative externalities. The principle that urban farmers have a responsibility to promote environmentally sustainable UPA was also highlighted during the discussions. An urban farmer at the conference observed that it was erroneous to assume that urban farmers are unaware of and unconcerned about the environmental problems associated with UPA. However, while they were, insecurity of tenure and lack of extension support made it difficult for the farmers to manage the environment any better than they were doing at the moment.

The issue about environmentally sensitive areas was also tackled in plenary. The perspective shared was with respect to the technology, ecology and UPA interface in relation to the definition and prescription of certain urban sites as environmentally sensitive and therefore unsuitable to UPA. The sensitivity of slopes and urban wetlands to human intervention through UPA activities is as much a function of the natural state and characteristics of the site as it is of the technology deployed/applied in the human intervention, a delegate argued. The limited investment in technology development and application in UPA, in itself a product of the temporary and

currently illegal nature of UPA, denies creativity to this sector. The lack of investment in this sector is therefore equally blame for UPA- induced environmental challenges as the urban farming practices currently applied. The delegates conceded that UPA-induced environmental externalities require concerted efforts including providing relevant technology and technical extension services towards the improvement of UPA.

There was also general agreement, demonstrated by the presentation by Maseva on Zimbabwe was also applicable in other countries in the region, that there is limited official capacity in terms of both numbers of practitioners working on UPA as well as the actual skills needed to improve the environmental sustainability of UPA. However, an improved policy, legislative and institutional environment would hopefully address this problem and result in the application of both traditional and non-traditional methods of conservation practiced. This would also need to be complimented by more organized and sufficiently supported farmers. Improved environmental sustainability of could also lead more positive perception of the activities.

In terms of wetlands, the procedure according to existing legislation in Zimbabwe is that groups or individuals proposing to use these areas need to apply for exemption. A group in Harare's Budiriro suburb affiliated to Musikavanhu Project has submitted such an application which application has not been processed two years down the road. As such the group continues to use the wetland with limited security of tenure and hence not able to invest adequately in conservation works or other mechanisms to protect the environment

While acknowledging that Maseva's paper drew a lot on Zimbabwean experiences and especially from Harare as well as a focus on crop production, delegates at the conference agreed that the paper raised pertinent issues around which to begin developing policies for effective management of UPA for the benefit of both the environment and the urban farmers. Such a process requires a creative capturing of urban farmers' needs, local knowledge and realities in a participatory manner with other stakeholders taking part in the design and implementation of activities in a coordinated manner.

Land, Water and Other Resources for Sustainable Urban Agriculture – Paper by Takawira Mubvami

Mr. Mubvami started his presentation by arguing that the successful execution of any economic activity is predicated on the availability and effective application of the necessary resources. He proceeded to cite the range of resources essential for agriculture in general including land, water, financial resources and the human

factor. This is notwithstanding the other resources like technology, information both for production and processing, distribution and marketing.

The four key resources of land, labor, water and financial resources are critical for agriculture and in most countries, public and private sector attention and priorities in resource deployment are biased in favor of rural agriculture. The limited share of resources devoted to UPA is therefore one of the factors that explain the low productivity levels. Mubvami's presentation addressed the need for providing adequate resources in terms of quantity, quality, targeting and with reference to the location of resources to be available to, accessed and applied by urban farmers.

Land

This is the most critical resource for UPA whose availability predetermines entry into the activity. The constraints to land availability were noted as relating to the fact that the available land is often in the form of open spaces belonging to council, government or is land earmarked for future development. The duration over which the land is available is therefore not predetermined which affects the flexibility with which the urban farmer or potential farmer can plan their production. This limits the extent to which services and other resources like finances can be provided given the general perception of UPA as both a low–return and temporary activity. This therefore becomes a vicious cycle in which UPA is trapped. First is the unavailability of suitable and secure land, which limits the flexibility of the farmer in their planning and further impairs their ability to mobilize resources from the open market. Because of the land related constraints to productivity UPA does not compete favorably against other urban land uses within the context of rapid urbanization.

Mubvami lamented the general lack of conscious attempts at making urban land available to UPA in sufficient quantities, being of the right quality and located appropriately in relation to both the users of the land and other support services of infrastructure

In terms of access i.e. who gets and uses urban land for UPA, which is indirectly linked to the land tenure system, Mubvami raised number of practical and policy issues in his presentation. Urban farmers access urban land for UPA through both formal and informal ways. The principal informal means include borrowing, squatting, informal renting while formal access takes the form of inheritance, purchasing as well as leasing. He highlighted that the majority of the poor urban farmers access land informally with the attendant risks of tenure insecurity, which limits levels, and extend of investment on the land. Because land is largely accessed informally there are considerable gender issues. Despite the majority of the people who work the land being women the ownership and access structure is

disproportionately male. Access to land for young people is also not being consciously addressed.

Urban food production is also very critical for households with HIV/AIDS sufferers as well as caregivers. He argued that with the growing prevalence of the disease urban and peri-urban agriculture has the potential to address the nutritional needs of HIV/AIDS sufferers notwithstanding the broader contribution to the food security of urban households given the growing incidence of urban poverty.

The presentation brought out the essential policy issues with respect to guaranteeing and protecting the urban poor's access to suitable land for the practice of UPA over determined periods through a number of strategies like leasing arrangements, providing people with access to public land with proper targeting especially of poor urban households, HIV/AIDS affected households and other disadvantaged groups.

Mubvami also urged policy makers and city managers to address questions of land quality and environmental management simultaneously. Such an approach will benefit from Environmental Assessments (EA), resource inventorying and profiling (audits) followed up by informed planning, implementation and support services.

Water

Some urban farmers use tap water (which is generally expensive) ground water, rain and surface water as well as wastewater. Wastewater available for UPA is either industrial, municipal or urban run-off. In some cases wastewater from burst pipes in used for irrigation purposes without any form of treatment. Wastewater is generally used out of necessity despite the public health and cultural issues associated with the use of wastewater.

The UPA products are inevitably affected, especially in terms of public perception, by the nature of the water used in their production. For crops Mubvami observed that there s a need to set standards for the use of wastewater and to provide information on the types of UPA activities that can be produced using wastewater e.g. irrigation of trees and pastures. The availability of information on the public health implications of using waste water to the general public who consume the products and the need to improve handling will go a long way in enhancing the availability of suitable water for UPA activities. Another solution discussed related to the setting up of low-cost wastewater treatment works, which are environmentally friendly and adaptable to the needs of the UPA practitioners (farmers)

Urban farmers also access underground water where available through sinking boreholes (where permitted) and digging deep wells. The problems associated with accessing ground water relate to costs as well as the environmental impacts of using

underground water. In some cases tapping ground water requires official approval especially where the resource (water) is scarce and accessed on a competitive basis. In the public interest borehole sinking and/or digging of wells for irrigation purposes might be prohibited to guarantee access of the resource for other uses e.g. residential, commercial or industrial and not agricultural uses.

The other source of water for UPA is tap water mainly where on-plot activities are concerned. The quality of water is guaranteed compared to waste water but the costs of the water often restrict farmers to its use on smaller portions of land. The availability of tap water is not always guaranteed and in most urban areas the rapid urbanization has meant that treated water provision persistently falls short of the demand by residential, commercial and industrial users. UPA plays second fiddle to these other urban land uses and as such its access to tap water is not guaranteed. The cost element also means that the cost of production is higher as compared to UPA activities accessing surface run-offs, wastewater or ground water. In such cases it might end up cheaper for the urban farmers to abandon UPA and secure the produce from the market rather than produce for own-consumption let alone marketing.

Unlike tap water whose quality is assured, rain and surface water is not of such an assured quality. Its availability is also restricted in space and time. This limits its availability to UPA. Ensuring that suitable land and water are available to the urban farmers constitutes a major challenge that city managers and planners keen on supporting UPA face as much as the farmers themselves. This explains why some UPA activities are undertaken on unsuitable land where water is found or only on a seasonal basis on suitable land where water (other than rain water) is not available. The water limitations that urban farmers face invariably force them to access untreated sources and surface water where it is available at times exposing the environment to some risks, which requires effective monitoring ideally undertaken with the participation of the farmers themselves as well as other stakeholders.

Financial Resources.

The availability of finance for UPA has been traditionally low, as agricultural resources have been deployed to rural agriculture, (communal, commercial and resettlement). Sources of finances that urban farmers may access include grants and loans from the public or private sector, input support mechanisms, tax incentives and pooling of personal savings in groups or cooperatives. Generally, however, affordable and accessible capital has not found its way into UPA or there have not been any formally recognized institutions dedicated to extending micro-credit facilities to urban farmers.

A number of cases where agro-industrial activities have received funding from formal institutions especially those being undertaken in the peri-urban areas exist.

There is however, need to explore ways in which UPA can be financed and supported as part of ongoing community development programs taking gender issues into account in terms of who accesses the resources and the conditions attached.

The availability of resources like land, water and finances to UPA is a critical policy area that can be addressed on a sector-by-sector basis or as a comprehensive package. The ability of actors in the land, water and financial services sectors to respond to the needs of the urban farmers was noted to be low or limited especially because of the constraints associated with UPA's 'illegality tag'. Policy and legislative reforms that accord legitimacy to UPA will pave the way for a process of hastening the recognition of UPA by practitioners in the land development, water and financial services, technology development and agri-inputs sectors to come up with packages and policy incentives that are targeted at supporting the urban farmer.

Annex 8 of this report provides the full text of this paper.

Discussion

Plenary discussions highlighted the fact that legitimization of UPA and its recognition will not necessarily remove the reality that it will still have to compete for these resources with other land-uses and activities. What the recognition does is to level the playing field and provide a framework for officially responding to the resource requirements of UPA in an equitable manner.

The fundamental question that addressing UPA's resource requirements also raises relates to its target or primary focus in terms of whether it is a poverty reduction or an economic development strategy. The two are not necessarily mutually exclusive but help to guide the process of allocating resources for UPA. Most local authorities look at UPA as a poverty reduction strategy and thus as an activity engaged in mainly by the urban poor. This justifies targeting the poor in allocating land, water and other public resources necessary for the practice of UPA. The second conception sees UPA as an income and employment generating activity where high value production and agro-processing take place. The poor can also take part in this from of UPA but the resource requirements of the two may differ which requires careful analysis as part of integrating UPA into the urban development process. It was further noted that the sectors that will respond to the UPA resource requirements because of its poverty reduction appeal might be different from those persuaded by its economic development promise. Such form of 'market segmentation' is important and will allow for more effective resource deployment especially public resources.

On the use of wastewater some delegates shared that there are some NGOs, private companies and other stakeholders keen on working with farmers to explore ways in which low-cost treatment and appropriate application of wastewater can be

developed. As noted above there is a need to demystify waste water in much the same way that the concept and practice of UPA has been and continues to be propagated. Provision of information supporting research and catalyzing dialogue will go a long in enabling creative ways of using wastewater.

Support Services to Urban Agriculture – By Godfrey Mudimu and Shingirayi. Mushamba

The paper by noted that UPA has become part of the food security system in the urban areas of most East and Southern African countries directly providing food and indirectly generating household income through saving on food expenditure.

The paper further noted that until the mid 1990's most governments and local authorities did not recognize the activity as a legitimate land use. With the shift from active prohibition most governments are now seeking ways for facilitating sustainable, safe and profitable production as UPA has been incorporated into the urban expansion plans of local authorities like Maputo in Mozambique, Dodoma and Dar-es-Salaam in Tanzania.

The paper further observed that active programs exist in most South African cities and in Zimbabwe most cities are now pursuing accommodating approaches with the government of Zimbabwe's Ministry of Local Government, Public Works and National Housing pledging more land for UPA from farms acquired around major urban centers under the ongoing national land and agrarian reform program.

The trend in acknowledging the importance of urban agriculture, through policy advocacy and practical support to it is beginning to draw the attention of policy makers, donor agencies and activists. This is because UPA is now being looked at as a response to issues of food security, economic development, poverty alleviation, urban blight, waste recycling and environmental preservation.

The table below captures the diverse range of farming systems in urban areas.

Table 1: Range of Farming Systems in urban areas

Farming systems	Product	Location or technique
Aquaculture	Fish, and seafood, vegetables, and fodder	Ponds, streams, estuaries, sewage, wetlands
Horticulture	Vegetables, fruit, herbs, beverages, compost	Home sites, parks, rights-of-way, containers, rooftops, hydroponics, wetlands, greenhouses, shallow bed techniques, layered horticulture
Floriculture	Flowers, house plants	Ornamental horticulture, rooftops, containers, greenhouses, rights-of-way

Animal Husbandry	Milk, eggs, meat, manure, hides, and fur	Zero-grazing, rights-of-way, hillsides, cooperatives, pens, open spaces
Agro forestry	Fuel, fruits and nuts, compost, building material	Street trees, rights-of-way, hillsides, cooperatives, pens, open spaces
Mycoculture	Mushrooms, compost	Sheds
Vermaculture	Compost, worms for fish feed	Sheds, trays, wetlands
Sericulture	Silk	Home sites, trays
Apiculture	Honey, pollination, wax	Beehives, rights-of-way, home sites
Landscape gardening, arboriculture	Grounds design and upkeep, ornamentation, lawns, gardens	Yards, parks, play fields, commercial frontage, road sides, lawn and garden equipment
Beverage crops	Grapes (wine) hibiscus, palm tea, coffee, sugar cane, herbed tea, banana (beer)	Steep slopes, beverage processing

Sources: UNDP 1996, Rowntree 1987.

Mudimu and Mushamba further observed that while UPA varies from city to city and country to country the two main forms of on and off-plot (intra-urban) and peri-urban (on the fringe) are prevalent.

UPA is noted to engage in short-cycle high value market crops using multi-cropping and integrated farming techniques applied on both horizontal and vertical space to best advantage. The use and reuse of natural resources, and urban waste to produce crops and livestock intensively, was also highlighted in the paper. Although recycling is high there are also external inputs that are applied at whatever scale of operation and these include pesticides and inorganic fertilizers among others. The bigger the scale of operations the greaser the need for extra-family resources and external inputs, the paper highlighted.

The paper also focused on the subject of agricultural support and service provision towards UPA. The examples of services highlighted as critical in this instance include extension, agro-inputs, research, credit and market information, which are essential for effective production. Technical support is noted as critical for the strengthening of production processes as well as minimizing the risks associated with unsafe use of agro-chemicals and less than optimal and inefficient production systems. Support therefore enhances if not guarantees optimal production to meet family needs and for marketing.

The paper proceeded to observe that a number of studies show that there are very few cities with urban agriculture extension services offered by either government (central or local), the private sector or non-governmental organizations to on or off-

plot UPA activities. The absence of technical support is attributed to the legacy of the past when UPA was not recognized formally especially activities undertaken by loc-income or poor people on small on or off-plot areas. The paper further observed that the situation is different with peri-urban farmers who invariably have more resources and knowledge.

Some of the policy issues that the paper raised with regard to support services include:

- Health and environmental risks associated with use of polluted water and solids, unsafe production methods and the spread of communicable diseases that may arise from the re-use of waste material and/or water.
- Coordination and networking arrangements amongst service providers. These include governments and local authority, agencies, NGOs, researchers, local and international funding bodies as well as private sector companies. The paper observed that there is limited inter-organizational coordination and networking which limits the effectiveness of the services or extension provided be it training, input provision or institutional support to farmer organizations

Mudimu and Mushamba suggested a number of strategies for integrating UPA into city management. These include:

- The need for governments to develop national policies that provide legal frameworks for urban agriculture
- Setting and institutionalizing mechanisms for effective coordination of UPA with direct stakeholder participation in planning and implementation
- Defining and/or setting up a leading stakeholder or institution for the coordination of UPA activities. It is essential, the paper argued, to get agreement from all stakeholders about the institutional mandate of the lead agency.
- Defining minimum environmental health standards suited to the ultimate consumers of the UPA produce.
- Regulating access to land and water as well as urban organic wastes and waste water
- Establishing and supporting an urban extension structure and program on the technical aspects of UPA
- Supporting (applied) research technology development as well as associated outreach, information and education services on the social, environmental, economic and ecological dimensions of UPA

Due to limitations of time, the paper was not discussed in the plenary. The full version of this paper is presented as Annex 9 of this report.

Urban Agriculture in Eastern and Southern Africa: Emerging Policy Issues.

This section pulls together the various policy issues that each of the formal presentations raised as well as those that were raised by the guest speakers and in plenary discussions. The initial list of emerging issues were drawn out by the facilitator, Dr. R. Mbetu, and teased out in plenary. The technical team that worked on the declaration did further work on distilling and collating the policy issues. The Harare Declaration on Urban Agriculture clearly responds to the issues in as far as it creates a policy framework within which regional and country-level responses to the challenges faced by UPA are to be addressed. It is captured in this section to juxtapose it to these issues, which it seeks to respond to.

1. Lack of official recognition in the past

In terms of the plenary sessions a crosscutting issue was the genuine **'confessions for the various official injustices perpetrated against UPA over the years in the region'**, which prefixed the bulk of the presentations. The conference largely proceeded on the basis of a search for a new dawn so that the past years' loss when UPA was not accommodated into the urban land-use system, not provided for in terms of both law and resources and actively discouraged can become a thing of the past and a history from which people can learn. The policy issues were therefore arrived at from the premise that the significance of UPA as a poverty reduction and economic development strategy is no longer in doubt. The challenge to be embraced was therefore one of letting it flourish in an environmentally sustainable manner and alongside other urban land-uses, which UPA can compliment and be complimented by. The notion of a responsive African city cognizant of the basic livelihood and socio-economic interests of the African urbanite permeated this search for new policy, legislative and institutional apparatus. The emerging issues are not presented here in any order of priority.

2. Information Collection, Management And Dissemination.

There are no conscious, structured or interlinked and continuous efforts at collecting, collating, processing and disseminating information on UPA at city, country and regional levels in terms of the extent to which UA is practiced, the socio-economic characteristics of the urban farmers, UPA's contribution to national food security, GDP, health and nutritional. Thus among other things, the numbers of households that engage in the activity, the actual sizes of plots accessed and how they are accessed, location of such plots, types of conflicts associated with unregulated access of plots, levels of income associated with UPA, social, economic and political characteristics of households involved, the environmental impacts associated with the UPA activities etc. largely remain unknown in the majority of cases. This partly results from the non-institutionalization of and partly to limited research on UPA. It is therefore important that strategies be developed and be financially supported if

UPA is to be properly understood for the purposes of making informed decisions. A database on UPA information can also be created and be continuously updated

Based on the country presentations, it is evident that there are unique positive and negative examples of UPA across the region. On the positive side, the land-use zones in Lilongwe (Malawi) and Dar es Salaam (Tanzania), which make provisions of UPA, can be used as living examples in trying to promote the cause of UPA. The same applies to the UPA projects in Swaziland. On the other hand, there are also classic examples on the negative, environmental impacts of UPA, including the clogging and silting of roads in Nairobi (Kenya) and Malawi associated with UPA induced soil erosion. The use of wastewater that has environmental and public health risks in Tanzania and Kenya is another example. As the region moves towards the development of a regional action plan on UPA, it is important that exchange visits and the sharing of information on both bad and good UA projects be provided for.

3. Linking UPA To Ongoing Community Programs.

For improved visibility and better appreciation of UA, it is important that it must link-up with already existing projects that have a potential to benefit from UA. For example it is reported that in Kenya, there are several projects that seek to help vulnerable groups that HIV/AIDS orphans, street children and other categories of the urban poor. Such projects also obtain in many other countries in the region. Synergies can be developed between UA and these projects. For example one can lobby for accessing land in an urban area for the purposes of feeding street children. The same can happen to HIV/AIDS sufferers. In this context, those responsible for the promotion of UA can link with organizations involved with HIV/AIDS, street kids and other categories of the urban poor and buy their support so that there will be concerted lobbying with decision makers. Success in such initiatives will bring more visibility and acknowledgement of UA as positive practice by decision makers. For a start, UA can even ride on the success built by some of these projects only to pay back later when it is firmly grounded.

4. Decentralization/Reform Efforts And Implications For Urban Agriculture.

The conference proceedings revealed that several countries were involved in local government reforms. Decentralization through devolution seemed to be the outstanding theme. There was a general consensus among participants that local authorities should be the lead agencies in the promotion of UPA within the broader frameworks of nationally established legislation. If local authorities are to be assisted in building their capacities to deal with UPA, it is important that the planning and implementation of local government reforms be done with the recognition of the importance of UPA. Thus for example, ideas have been mooted around local

authorities providing a budget for the promotion of UPA and creating departments that would specifically take care of UPA in their respective jurisdictions.

If UPA is going to enjoy more success under local authority, then its proponents should lobby and support decentralization initiatives in several countries. UA will benefit more from decentralization as opposed to centralized development planning. In this respect, the lobbying for decentralization need, therefore to be supported

5. Urban Agriculture and the Urban Waste Management Dilemma.

The conference demonstrated the extent to which UPA's application of wastewater resources raises issues from a health and cultural dimension. It is important that more investment be made towards the development of mechanisms that ensure that UPA contributes to waste management for improved environmental management. For example, appropriate technologies need to be developed that ensures urban wastes can be safely converted into a useable resources in the practice of UPA without causing environmental and public health risks. It will be desirable that monitoring systems be put into place that check the use of urban wastes in supporting UA.

6. Institutional Capacity and level of Urban Farmer Organization.

Participants noted with concern that only one participant to the conference was an urban farmer. The voice of the urban farmers themselves was therefore being missed. The Minister of Local Government from Swaziland even called for another conference that would target the urban farmers. In this context, it is important that a platform be created that allow uninterrupted dialogue between urban farmers and all the other stakeholders. Information dissemination also needs to target the farmers themselves.

7. Urban Agriculture And The Resource Provision Dilemma.

The range of resources essential for agriculture in general including land, water, financial resources and the human factor. This is notwithstanding the other resources like technology, information both for production and processing, distribution and marketing. These critical resources are currently being deployed with a rural focus and this is limiting the extent to which UPA increase the productivity levels. Extension services are also not being provided except in Tanzania and as such other countries could learn from this experience.

8. Issues Of Strategic Perception And Conception.

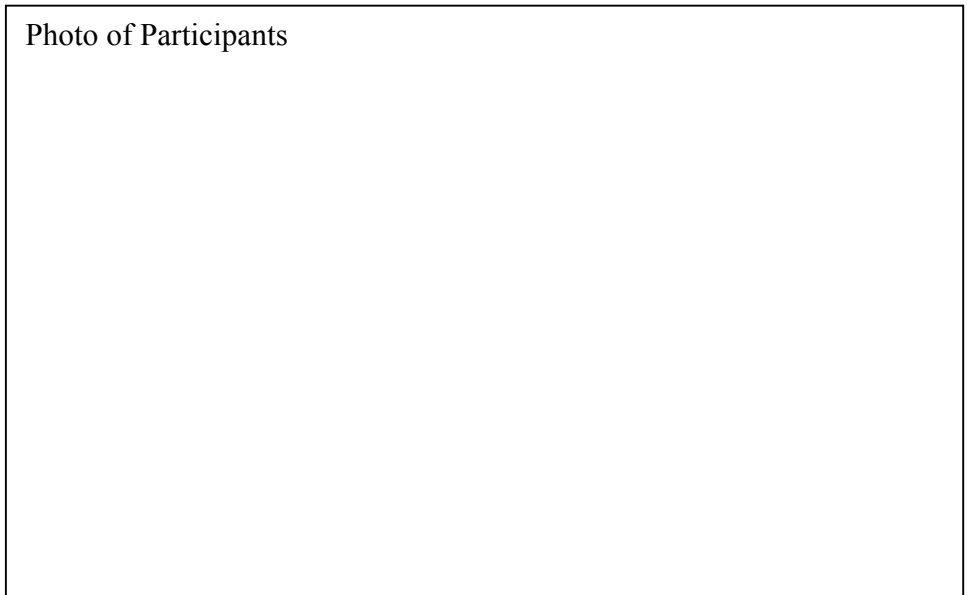
UPA is currently being perceived as a temporary activity and does not enjoy formal protection in terms of its claim to land and other resources. The farmers are not adequately supported. However, the strategic importance of UPA lies in its potential (demonstrated in parts of the region) to reduce poverty through provision of food as well as in economic development as high-value production and agro-processing activities can be sustained by UPA products. The framework paper and the country case study presentation for Zimbabwe demonstrated the need for conceptual clarity as a firm premise for policy formulation.

9. Policy, Legislation and Institutional Arrangements

Gaps, inconsistencies and policy, legislative and institutional inadequacies were acknowledged by all delegations. Agreement on this being a critical lever for changes at other levels was unanimous and the conference declaration itself rests on a commitment to create an enabling environment. Related to this fundamental aspect are specifics of capacities, attitudes and other software issues regarding facilitating the practice of UPA. Policy instruments and legislative changes receive life from practitioners whose orientation and capacity building is critical to the success of UPA.

10. Urban Agriculture and the Urban Environmental Challenge

There was agreement at the conference that UPA, like other urban land uses contributes to the environmental challenge. The challenge is multi-faceted in that it is a public health as well as an ecological issue. The nature of the practice and the illegality of the activity is not helping in as far as it is not inspiring confidence and a sense of responsibility on the side of the farmers on the one hand and makes it almost impossible for any public or private sector institutions to offer extension services to urban farmers. Promoting environmentally sustainable UPA is beneficial to both the environment as well as the urban farmer. Appropriate technology targeted purely at the farming enterprise and in terms of waste disposal and management, low-cost and accessible wastewater treatment and reuse needs to be availed to the urban farmer.



11. The Harare Declaration

The Harare Declaration, as already mentioned, was developed in a very participatory manner with inputs from all the members present based on a draft developed by the technical committee. The members of the technical team were Francisca Maina, Sibongile Lukhele, S Mushamba, T Mubvami, Dr Mbetu (facilitator), K Chatiza and N Marongwe (rapporteuers). The full text of the declaration is presented in Box 2.

Box 2 - The Harare Declaration.

THE HARARE DECLARATION ON URBAN AND PERI-URBAN AGRICULTURE IN EASTERN AND SOUTHERN AFRICA

Preamble;

We, the Ministers responsible for Local Governments from Kenya, Malawi, Swaziland, Tanzania and Zimbabwe, at our meeting in Harare on Urban and Peri-urban Agriculture (UPA) in Eastern and Southern Africa organized by the Ministry of Local Government, Public Works and National Housing of the Government of Zimbabwe and the Municipal Development Partnership for Eastern and Southern Africa, in collaboration with UNDP, UNICEF, FAO-SAFR, FANRPAN, RUAFS and IDRC held on 28 and 29 August, 2003;

Acknowledging,

The presence of local government practitioners and representatives of non-governmental organizations and community based organizations;

Acknowledging further that:

- UPA is a widely practiced activity in and around towns and cities within the region on parcels of land with alternative competing uses;
- UPA has generally been practiced informally without appropriate policy, legislative and institutional frameworks;
- UPA plays, and will continue to play, a significant role in promoting food security, employment creation and income generation, health and nutrition and improving the economies of urban areas;
- Some governments in the region have made significant progress in incorporating UPA in their urban development plans, and that others are now beginning to rise to the challenge,

Recognizing,

The existence and increasing practice of UPA and also noting the many challenges that it faces, including:

- Absence, inadequacy and or inconsistency in the policies, legislation and institutional arrangements for regulating the sector
- Limited availability of and access to resources
- Limited research, documentation and information-sharing nationally and regionally
- The need for environmental sustainability

Accepting,

That the foregoing challenges require immediate and prudent reform of policies, legislative and institutional arrangements in order to effectively integrate UPA into our urban economies,

We therefore,

Call for the promotion of a shared vision of UPA that takes into account the specific needs and conditions in the region, and accordingly commit ourselves to developing policies and appropriate instruments that will create an enabling environment for integrating UPA into our urban economies.

Thus done at Harare on 29th Day of August, 2003

Appendices.

The editors wish to advise readers that some of the papers were not written in prose form. There are thus three presentations that are in bullet-point form. We have chosen to include them in their original form to capture the real contributions of the authors. Further, until the time of going to press, the organizers had not received the Country Position Paper of Malawi. This is regretted.

Annex 1: Impacts of Urban agriculture, Integration into Urban development and Prospects for Growth in Eastern and Southern Africa, Dr Tobias Takavarasha.

Annex 2: Urban Agriculture in the Republic of Kenya, by Millicah Thaira and Francisca Maina.

Annex 3: Urban Agriculture in the Republic of Malawi, Hon. Henry Midiani *[not available]*

Annex 4: Urban Agriculture in the Kingdom of Swaziland, Hon. Albert Tshabangu.

Annex 5: Urban Agriculture in the The United Republic of Tanzania., Hon. Mizengo Pinda.

Annex 6: Urban Agriculture in the Republic of Zimbabwe, Dr Vincent Hungwe

Annex 7: Urban Agriculture and the Urban Environmental Challenge, By Crispen Maseva

Annex 8: Land, water and other Resources for sustainable Urban Agriculture by Takawira Mubvami.

Annex 9: Support Services to Urban Agriculture, By Godfrey Mudimu and Shingirayi Mushamba

Annex 10: List of Participants

Annex 1: Thematic Paper On The Impacts Of Urban Agriculture, Integration Into Urban Development And Prospects For Food Security And Growth In Eastern And Southern Africa

Paper by Dr Tobias Takavarasha, Chief Executive Officer
Food Agriculture and Natural Resources Policy Analysis Network (FANRPAN)

FANRPAN Mission

- To coordinate, influence and facilitate policy research, analysis and dialogue at the national, regional and global levels in order to develop the food, agriculture and natural resources sector through networking, capacity building and generation of information for the benefit of all stakeholders in the SADC region

FANRPAN Objectives

- Promote appropriate agricultural policies in order to reduce poverty, increase food security and enhance sustainable agricultural development in the SADC region;
- Improve policy analysis, research and formulation of priority SADC themes;
- Develop human and institutional capacity for co-ordinated dialogue among all stakeholders;
- Improve policy decision making through the generation, exchange and use of policy related information

FANRPAN will achieve these objectives through:

- stakeholder driven policy studies,
- dialogue,
- networking with similar policy research institutes
- disseminating results to stakeholders through workshops/seminars, newsletter, internet,
- capacity building/training
- collaborating with other SADC programmes and initiatives

Type Of Organization

- An autonomous organization with a Constitution and elected Board. To represent policy interests of various stakeholders

Trade Policies And Agricultural Trade In The SADC Region: Challenges And Implications

- Review the performance of trade policies in the region, both policies of individual member states and SADC policies.
- Analyze the flow of agricultural trade in the SADC region

- Investigate sector specific trade policies, such as tariff and non-tariff policies. This will involve assessing shortfalls and impacts of tariff, non-tariff and technical barriers to trade in the region, with particular focus to trade in agriculture.

Assessing Impact Of HIV/ AIDS On The FANR Sector In SADC

- The broad objective of the study is to undertake a multi-country assessment of the impact of HIV/AIDS on the FANR sector, that will include a review of literature. The study will take account of what has been done or needs to be done to improve implementation strategies. It will assist in creating a database on the impact of the disease at the micro and macro level at the national and regional level and make appropriate recommendations for use by policy makers and stakeholders.

Objectives

- To identify strategies to address co-factors of vulnerability to the epidemic and its impact. This will assist in developing specific intervention measures to counteract the negative impacts of the disease on agricultural communities and their households; and
- To establish mechanisms and strategies designed to mitigate the negative effects of the disease. There is also need to incorporate strategies and policies to combat HIV/AIDS in agriculture and national development planning in general.

Definition Of Urban And Peri-Urban Agriculture

- Urban and Peri-urban agriculture refers to agricultural activities located within (intra-urban) or on the fringes (peri-urban) of a town, a city or a metropolis, which grows or raises processes or distributes a diversity of food and non-food products, using largely human and material resources, products and services coming from in and around that urban area, and in turn supplying human and material resources, products and services largely to that urban area.

Why Do Households Engage In Urban Agriculture

- Production for home consumption
- Ready market
- Income enhancement
- Response to economic crisis
- High prices of marketed food
- Supplementary employment
- Availability of vacant land
- Farming as a hobby

Constraints Affecting The Growth Of Urban Agriculture

- Insecure land tenure
- Limited access to arable land
- Theft and land conflicts
- Limited access to water
- Bias towards rural agriculture
- Prohibitive urban policies and regulations
- Lack of support services and productive inputs
- Lack of organization among urban farmers

Health And Environmental Risks Related To Urban Agriculture

- Inappropriate handling of agro-chemicals by producers
- Crop selection or location without due regard to air, water and soil pollution
- Disposal of wastes from crops and livestock
- Poor handling during marketing and distribution
- Deforestation, soil erosion

Types Of Urban Agriculture

- Vegetable production in peri-urban farms
- Backyard gardening
- School gardens
- Agro-forestry and fruit frees
- Plant nurseries
- Various types of livestock
- Food crops (maize, groundnuts, potatoes)

Policy Perspectives Of Urban Agriculture

- Land allotments and conflict prevention
- Allocation of extension services and resources
- Should city planners include agriculture
- Cost and food security implications
- Negative health and environmental effects
- Employment, youth and gender issues
- Special case for disadvantaged groups
- Accurate statistics on production

Annex 2: Presentation by Republic of Kenya – By Millicah Thairu and Francisca Maina on Berhalf of
HON. E. KARISA MAITHA, M.P.
MINISTER OF LOCAL GOVERNMENT

Statistics on Kenya

- Area 592,909 sq Km (Land area 98.1% water area 1.9%)
- Arable land 20%, Asals 80%
- Population 30.8 million
- Urban population 10 million
- Annual population growth rate 2.6%
- Annual Urban population growth rate 5%
- Capital city Nairobi; Population 3 million
- Sources of GDP Agric. 25%; Man 13.3%; Public services 14%; Financial services 10%
- Real GDP growth rate 0.2% FY2000, 2% FY 2001.
- The country is undergoing a recovery phase after two decades of declining economic performance and social conditions.
- An economic recovery strategy paper for wealth and employment creation 2003-2007 launched, under implementation.
- GNP per Capital Approx 300 US$
- Legal and Political context: New Government (NARC) elected in Dec 2002. Espouses the work ethic and strong political commitment to reforms to create solid economically viable local authorities and the devolution of power to local authorities.
- No. of Local Authorities 175
- City council 1
- Municipal councils 47 (4 in the process of assuming city status).
- Town councils 60
- Country councils 67
- Health and related indicators
- Life expectancy 57
- Gross primary and enrolment 93%
- HIV/AIDS over 2 million infected
- Poverty incidence 56.7%

Agricultural Policy Environment

- Base for economic growth, employment creation and foreign exchange generation.

- Accounts for 25% of GDP directly while indirectly it is estimated that the sector further accounts for some 27% through its linkages with manufacturing, distributing and other service-related sectors.
- Provides income and employment to 80% of the population, especially in the rural areas. Urban agriculture a reality, though not integrated in the official agriculture outfit.
- Accounts for 60% of the total export earnings, 45% of the Government revenue and 75% of industrial raw materials.

Food Security

- The National Food Policy relates production and distribution. This encompasses pricing and marketing, agricultural inputs, research extension, food security, processing trade, nutrition, resource development and incentives.
- Accounts for 60% of the total export earnings, 45% of the Government revenue and 75% of industrial raw materials.
- At national level Kenya has achieved a reasonable measure of food self-sufficiency due to the following food policy among others:
- Seed policy including a financially self sustaining breeder and foundation seed until established under the Kenya Agricultural Research Institute (KARI)
- Livestock breed improvement
- Agricultural inputs policy
- Irrigation policy
- Agricultural and livestock credit policy
- Research and extension policy
- Agricultural storage policy
- Food storage in the private sector
- Food marketing and distribution policy
- Food trade policy

Urban Agriculture

- Results from ongoing research:
- A diverse range of food crops including cereals, root crops, vegetables legumes and livestock products.
- Slowly gaining recognition at the local Government levels. In Kitui and parts of Nairobi. More is required to integrate this livelihood. Strategy in the local government economies.

Local Government in Kenya

The Ministry of Local Government is responsible for the oversight of 175 Local Authorities (LAS) through the Local Government Act. Currently LAS are undergoing reforms geared towards Efficiency, Accountability, Transparency and Citizen Ownership in order to:

- Improve local services delivery
- Enhance economic governance
- Alleviate poverty

Reforms Include:

- Review to ensure viability sustainability;
- Accelerating/Deepening identified reform areas;
- Ongoing constitutional review with devolution of powers and functions to local authorities
- Legal and institutional reforms to give local authorities as autonomy and capacity to function in the devolved government.

Ongoing Initiatives

Towards good governance, economic recovery and employment creation.

- Social Integration
- 2003-The street families rehabilitation programme. 250'000 children currently in the programme.
- 2003-The free primary education programme. Approx. 93% eligible children on course. Targeting the 7%.
- Establishment of a slum upgrading, low-cost housing and infrastructure fund (KENSUF) to act a depository of budgetary allocations and donor funds for the financing of slum upgrading, low-cost housing and related infrastructure.
- HIV/AIDS campaign with highest political support.
- Health programmes-universal free malaria treatment.
- Intergovernmental Fiscal Transfer
- 2000 Local Authority Transfer Fund (LATF) block grant form 5% of the national income tax.
- Participatory Development
- Local authority service delivery action plans (LASDAP) a planning and budgeting tool used in Las to integrate stakeholder participation in the development process.
- Urban Management
- Urban development policy formulation

- Environmental management
- Greening the city. Landscaping and beautification of urban areas.
- Urban safety
- Legal and constitutional reforms
- Strong proposals towards devolved governments in ongoing constitutional review process.
- Legal reforms inevitable to implement new constitution and policy directions.

Emerging Directions

- At the macro level, the central government has articulated sound policies, but has yet to comprehensively address the urban and peri-urban agriculture potentials.
- This emerging agriculture frontier is yet to be integrated into the official agriculture outfit. *Compare UPU agriculture to the donkey*.
- There is a growing awareness of the importance of urban agriculture by various actors in relation to its potential towards urban food production and safety nets.
- In the context of the widespread poverty and HIV/AIDS incidence besetting our economies, the encouragement of urban and peri-urban agricultural developments provides an avenue for nutrition safety nets for urban populations, small land holders and the landless.
- The role of Local Governments in the development and integration of urban and peri-urban agriculture must be strongly articulated in order to facilitate urban food production and local economic growth.

The Way Forward

- Acceleration of research to inform policy makers and key gate keepers of the local economic development scenario.
- Continuous experience sharing at local, regional and international levels including dissemination of best practices.
- Integration of urban Agriculture in national and local level policy frameworks.
- Promote enabling legislative and regulatory framework particularly at the local government levels.
- Local authorities and other stakeholders to facilitate the provision of supporting infrastructure for those engaged in UPU agriculture.
- In the UPU agriculture resource mobilization and allocation priority should be given to the socially disadvantaged groups, including HIV/AIDS sufferers and care givers.

- UPU agriculture should be given a higher profile.
  This can be achieved and sustained through a regional programme inter alia.

Conclusion

- The character of the city derives from the basis of livelihood of its populace. Cities in Africa will inevitably reflect the reality of UPU agriculture as a plausible livelihood strategy. We need to arise to give voice to this process.
- We should maximize on the African family structures and livelihood patterns to provide nutritional support needed to enhance caring for HIV/AIDS sufferers.
- Kenya is willing and ready to support the cause being promoted through this forum on urban and peri-urban agriculture.

Annex 4: Urban Agriculture in the Kingdom of Swaziland – By Hon. Albert Tshabangu, Minister Of Housing And Urban Development.

Let me start my presentation by narrating experiences with the issue of Urban Agriculture in Swaziland. It would seem that this activity goes on without anyone taking any notice but it is there, nevertheless people are engaging in urban agriculture whether we choose to be aware of it or not.

A couple of years ago I received applications from two associations who were seeking permission to utilize vacant urban land in a small town named Lavumisa. This town happens to have vast tracts of government owned land within the urban area as well as the Jozini dam, which can be used for irrigation. The associations therefore saw an opportunity to improve their lot through agricultural activities. They wanted to engage in diary farming, piggery (which was already in operation), sugarcane, vegetables and maize. When I received the applications and looked at what was proposed, it looked to me as if I was expected to allocate a farm. I then checked the regulations governing urban areas and noted that it would seem that they were designed to prohibit urban agriculture. What was allowed was only a limited number of animals and special restrictions attached. Clearly what is permitted cannot constitute an income generating activity.

The other request came from the Swaziland chapter of AMICAALL who in their programme to help those affected and infected by HIV/AIDS have identified urban agriculture as a vehicle to meet the nutritional and financial needs of

sufferers. Again that brought to light the need to re-visit the urban regulations to meet these emerging needs.

In the town of Piggs Peak a large tract of land is leased to a forestry company, which is engaged in timber production. This activity is generating a good income for the town. Here again is a clear demonstration that this activity goes on in the urban areas.

It is very clear that as an intervention for poverty alleviation, urban agriculture would be an effective tool for enhancing the income levels of the poor and improve access to affordable foodstuffs to help provide the nutritional needs of those affected about HIV/AIDS.

Policies and programmes need to be developed to regulate urban agriculture. Points to be taken into consideration are:-

1. A clear definition of urban agriculture and the various types that may be allowed in an urban area
2. Urban Agriculture should be included in the Town Planning schemes as one of the land uses
3. The establishment of an institutional framework to effectively regulate and monitor this activity
4. The beneficiaries of the urban agriculture should be clearly defined/whether the be associations cooperatives, individuals, the private sector etc
5. Securing and fostering political will at the local level
6. There should be information sharing on best practices
7. The need for micro financing for the urban agriculture activity
8. Ensuring security of tenure in order to attract financing
9. Access to clean water for irrigation and other uses pertaining to urban agriculture
10. The need to employ agricultural extension officers in the municipalities to provide the necessary expertise
11. Land tenure policies for urban agriculture. Will the land be available to:
    - Individuals
    - Associations
    - Co-operatives
12. The need for the revision of the legal instruments governing municipalities
13. Need to co-ordinate the stakeholders i.e. those involved in the activity and also engaging in research at grassroot levels
14. The need for personal re-education and transformation of national and local government officials
15. The need for a follow-up workshop involving the urban farmers

Annex 5: Urban Agriculture in The United Republic of Tanzania – Presented by Hon. Mizengo Pinda, Deputy Minister, Minister of Local Government.

Country Profile

The United Republic of Tanzania covers the largest area among the East African countries located between Latitude –12 degrees South of the Equator and between Longitude 29-41 degrees East of Greenwich. It borders on the Indian Ocean to the East, and it has land boarders with eight countries: in the east, Kenya (796kms) and Uganda (396kms) in the north, Rwanda (217kms), Burundi (451kms), the Democratic Republic of Congo (across Lake Tanganyika, 478kms) and Zambia (338kms) in the west, and Malawi (475kms) and Mozambique (750) in the south. The country has a total area of 945,234 square kilometers (365,000 sq miles) of which 886,040 square kilometer is land and 62,050 sq. km, water. Zanzibar has an area of about 2332 square kilometers (URT, 1994; URT, 1999a: 13).

Tanzania has an abundance of inland water, with several lakes and rivers. Lake Victoria covering an area of 35,000 sq. kms, is the world's second largest lake and drains into the Nile River and on to the Mediterranean Sea. Lake Tanganyika (13,000 sq. kms) runs along the western boarders and is Africa's deepest and longest freshwater lake and the world's second deepest lake. Lake Nyasa (6,000 sq, kms) lies at the intersection of Tanzania with Malawi and Zambia.

Except for a narrow belt of 900 square kilometers along the coast, most of Tanzania lies 200 metres or more above sea level and much of the country is higher than 1,000 metres above sea level. Mt. Kilimanjaro in the north rises to 5,895 metres; the highest point in Africa.

The main climatic feature for most of the country is the long dry spell from May to October, followed by a period of rainfall between November and April. The main rainy season along the coast and the areas around Mt. Kilimanjaro is from March to May, with short rains between October and December. In the western parts of the country, around Lake Victoria, rainfall is well distributed throughout the year, with the peak period between March and May.

Tanzania's population is around 34.6 million people (2002 National Census) with over 70% of the people living in rural areas, out of who approximates 85% are engaged in agricultural activities

Economic Development

Tanzania's economy is dominated by agriculture. Subsistence crops are maize, rice and wheat. Main cash crops include coffee, cotton, tobacco, cashew nuts, tea, sisal and cloves (in the case of Zanzibar).

Manufacturing industries manufacture agricultural inputs (farm tools) and process agricultural products (cigarettes, beer, pyrethrum, shelled cashew and textiles).

Tanzania's mineral wealth, which has yet to be fully exploited, includes gold, diamonds, tanzanite and various other gemstones, natural gas, iron ore, coal, spring water, phosphates, soda ash and ash. Tanzania also has a number of tourist attractions, including national parks, games reserves, etc.

Since independence, the Government of the United Republic of Tanzania has explicitly put people at the center of the country's development process. Various plans and programmes to expand and strengthen basic social services such as health and education were formulated and implemented. This resulted in significant socio-economic progress in the late 1960s and 1970s. However, all the gains were eroded during the economic recession of early to mid 1980s. The Government responded to the economic crisis by implementing IMF backed Structural Adjustment Programmes (Sap's) which were characterized by the transformation of the country's philosophy from socialist ideology to an open economic approach based on private enterprise, fiscal discipline, free trade and markets and a pluralistic political system.

The Tanzania Government has made considerable progress towards achieving macroeconomic stability in recent years. With inflation now firmly under control. The focus now is the establishing of a credible fiscal policy. Tanzania's broader main goal is to create a favorable macro economic climate for the real GDP growth rate of at least 6 per cent per year, which, coupled with increased spending in the social service sector, should allow the country to reduce poverty significantly. In addition, Tanzania has produced a Poverty Reduction Strategy Paper outlining the major steps necessary to provide a credible basis for sustainable improvement in the lives of the poor.

Despite the recent macro-economic gains, absolute poverty is persistent in Tanzania. The country remains one of the poorest in the world ranking 156th in 1999 Human Development Index, down from 150th in 1998. Based on the 1991/1992 Household Budget Survey (HBS) around 27 percent of the people live in households whose total expenditure is insufficient to obtain enough food to meet nutritional requirements, and about 48 percent are unable to meet their food and non-food basic requirements. Estimates for the year 2000 suggest that poverty levels have increased during the period 1991/2-2000 from 48 per cent to 56 per cent for Mainland Tanzania.

The main development challenge, which all efforts in Tanzania eventually aim to address, is widespread and persistent poverty, with half of the population is still

living below the basic needs poverty line. Poverty in Tanzania is characterized by low income, high mortality and morbidity, **poor nutritional status**, low educational attainment, vulnerability to external shocks, and exclusion from economic social and political processes. There are also important regional and gender differences in the levels and specific dimensions of poverty.

Good Governance

The Government of Tanzania has given governance issues the highest priority and has embarked upon several comprehensive reforms addressing various aspects of the governance system. The Framework on Good Governance provides an overview of governance related reforms. Each reform element among others includes the following:-

- Rationalization of public sector functions, leaving all profit making activities to the private sector.
- Decentralization of decision making from the center to local councils, (urban/districts).
- Political Reforms that promote respect for diversity of opinion
- Public Service reforms for streamlining ministries and other government agencies.
- Strengthening accountability and transparency as a means of stamping out corruption and bribery.
- Development of effective and efficient service delivery system.

In order to give greater voice to the people the government plans to complete the decentralization of administrative and planning responsibilities to lower administrative levels over the next four years (2001-2004). In addition, the government intends to strengthen democracy through promotion of democratic institutions particularly at community levels.

Major Urban centres in Tanzania

Most of Tanzanian towns are small with population of much less than one million residents. Major urban centers include Dar es Salaam, Mwanza, Arusha, Mbeya, Zanzibar, Dodoma, Tanga, Tabora and Moshi. Dar es Salaam is the largest and by far the most densely populated city.

Population and growth rates differ by city and thus the degree of physical resources as well as the rate of the lateral expansion. Table 1 shows the population of the major urban centres in Tanzania as based on the Population Census of 2002.

Table 1: Population of Major Urban Centres in Tanzania

Urban Centre	Status	Population (2002 census)
Arusha	Municipality	282,712

Temeke	Municipality	771,500
Ilala	Municipality	637,573
Kinondoni	Municipality	1,088,867
Dodoma	Municipality	324,347
Iringa	Municipality	106,668
Bukoba	Town Council	81,221
Kigoma	Town Council	144,852
Moshi	Municipality	144,336
Lindi	Town Council	41,549
Musoma	Town Council	108,242
Mbeya	Municipality	266,422
Morogoro	Municipality	228,863
Mtwara	Town Council	92,602
Mwanza	City	476,646
Kibaha	Town council	132,045
Sumbawanga	Town Council	147,483
Songea	Town council	131,336
Shinyanga	Municipality	135,166
Singida	Town Council	115,354
Tabora	Municipality	188,808
Tanga	Municipality	243,580

Source: 2002 National Population Census

Overview of Urban and Peri-urban Agriculture

Defining *Urban Agriculture* is problematic because of the varying contexts in which it takes place, the land involved, and the people undertaking it. Many people have defined UA differently. In the Tanzanian context, ***Urban Agriculture is defined "as the raising of animals such as dairy cattle, poultry, pigs and goats, and growing of vegetables and field crops in areas designated urban by the United Republic of Tanzania under the Town and Country Planning (Ordinance CAP. 378 of 1956 revised in 1991)***

Urban food production has been one of the strategies used as a direct response to local needs for food security. Urban food production as a supplement to the urban food supply system is favoured by the availability of open land in most of the major urban centres. The other reasons, which have prompted urban agriculture, include the desire to supplement incomes and economic survival for the unemployed and low-income earners. However the accessibility to land and urban land use pattern differs with the historical background of the specific town thus varying degree of accessibility to production resources as well as food supply systems.

In addition urban agriculture is recognized as a management tool in a number of issues, including:

- Solid waste management and city cleanness through composting and nutrient recycling;
- Protection of road sites and public land from illegal dumping and squatting;
- Creation of green spaces with an effect on the urban climate; and
- Control of environmental degradation (soil erosion)

Policies and Laws Supportive of Urban Agriculture

Recognition of UA is reflected in several laws and regulations including the Local Government (Urban Authorities) Act No.8 of 1982, the Town and Country Planning Ordinance (Cap 378, Urban Farming Regulations of 1992, the National Land Policy of 1995, the Agricultural and Livestock Policy (1997), and the National Human Settlements Development Policy (Jan 2000).

(i) **The Agricultural and Livestock Policy (1997)** observes that *agriculture is not a principle function of towns but when properly organized UA has the potential to provide employment, income and is a supplementary source of food supply*. The policy states that "**the government will continue to regulate the conduct of Urban Agriculture and will ensure that it does not disrupt planned urban development".**

(ii) **The Urban Farming Regulations of 1992** give the following guidelines:

- "urban farming" means the carrying out of plant and animal husbandry activities within statutory township boundaries
- no person shall occupy or use more than three acres of land for urban farming
- only zero grazing is allowed and the number of cattle is restricted to four head per person and
- any farming activity which is deemed to constitute a nuisance in the form of noise or smell or pose a physical danger to safety of the public shall not be permitted in areas other than those zoned for urban agriculture.

(iii) **The National Human Settlements Development Policy (Jan 2000)** states that the Government Shall:

- designate Special areas within planning (urban) areas whereby people will be granted legal rights to engage themselves in agricultural activities
- continue to regulate and research on the conduct of and will ensure that it does not disrupt planned urban development

- review existing laws to facilitate planned Urban Agriculture; and
- facilitate the construction of appropriate infrastructure to mitigate/prevent land degradation, water pollution and health and safety hazards in areas whereby agriculture is permitted

The Planning Process in Favour of Urban Agriculture

The comprehensive land use plans, which were previously prepared to guide the development and growth of urban centres in Tanzania, did not designate land for urban agriculture, which was considered as undesirable activity in the urban areas apart from being a potential health hazard.

The current planning approach, especially that applying the Environmental Planning and Management (EPM) process introduced in the country through the Sustainable Cities Programme has now recognized UA as one of the major land uses and an important informal activity.

Main agro-environment features for the urban centres

Most of the Tanzanian towns and cities are characterized by varying climatic conditions ranging from cool highlands to lowlands with coastal humid climatic conditions. These variations contribute a lot to the levels of urban production Arusha and Mbeya municipalities which are favoured with cool climate produce temperate vegetables like leek, carrots, apples and pears. These municipalities have favourable conditions for exotic livestock breeds (cattle, goats and sheep). Although the municipalities and cities with a coastal climate (Tanga, Dar es Salaam and Zanzibar) do not offer very favourable conditions for intensive agriculture, urban agriculture is widely practiced.

Overall food security situation and poverty occurrence in the urban and peri-Urban areas

Urban centres of Tanzania rarely face acute food shortages as they provide a market for the rural food supply. The subsistence food production in urban and peri-urban areas bridges the gap between the rising cost of food and the rapidly eroding purchasing power of a majority of the population. The urban food supply pattern follows the classical theories that perishables are produced in intra-urban areas while peri-urban areas supply mixed types of agricultural produce. Major staple food and beef come from rural areas.

Marketing of urban agricultural products

Small-scale farmers in urban centres produce for different categories of customers including low and medium income urban residents. Four different market outlets are used: selling wholesale in the main markets; directly at farm gate; the roadside; and at small neighbourhood markets. At the farm gate it is either whole sale to middlemen or retail to neighbours from a make shift stall. Except for farm gate sale. The producers rarely sell their vegetables in a formal market place because of high stall fees and market taxes. In Dar es Salaam, Kariakoo market which is the city's largest and most important overt is the main outlet of vegetables from rural, peri-urban as well as intra-urban production areas. However there is minimum competition of product sale due to the fact that the types of vegetables delivered at Kariakoo differ according to place of origin. Temperate vegetables come from upcountry while non-leafy vegetables come mainly from peri-urban areas of the city.

Urban horticulture production plays a vital role for supply of leafy vegetables in major urban areas. In Dar es Salaam more than 90% of the leafy vegetables consumed are produced in the urban open spaces and home gardens.

Nature and Extent of Urban Agricultural Production

In recent years urban agriculture in Tanzania has became an integral part of the urban economy. The intensive production of vegetables and livestock provide the entrepreneurs with relatively high economic returns which have provided effective incentive for increased production.

According to a study by the Planning Commission and the Ministry of Labour and Youth Development (1995), about 30% of the urban population gain an income in the informal sector. The study further indicates that about 6.5% of the informal urban workforce is engaged in urban agriculture, not taking into account the huge number of subsistence home gardeners in major urban centres.

Urban agriculture in Tanzania is widely spread in almost all-urban areas: It is still however under small-scale level of production. It is estimated that urban agriculture in Dar es Salaam produces around 50,000 – 60,000 tons of leafy vegetables per year while the peri-urban areas supply 25,000 tons of non-leafy vegetables.
It is estimated that nearly 236 open spaces covering an area of 650 ha in Dar es Salaam City produce vegetables and that approximately 4000 farmers are engaged in full time vegetable production.

Quality of the Produce at Consumer Market Level:

In Tanzania little has been done in quality control of the urban agriculture produce. Visual impression of the produce to a large extent is used to assess the quality of the produce. Some effort has been made on the production side to minimize pollution as well as contamination. The use of organic inputs (chicken manure, compost and natural pesticides) in urban vegetable production to some extent ensures quality of the product. However there are additional sources of pollution and contamination (irrigation water, vehicle fumes and animal drugs), which need to be addressed to ensure that the produce is of acceptable quality and safe for human consumption.

Plant and Animal Species produced:

Types of most farmers in urban and peri-urban areas produce between 3 to 12 vegetable plant species and few fruit trees, staple corps, roots and tubers as well as a wide range of animal species. However crops commonly grown in urban areas are determined by either size of land available for production, environmental condition of a given urban center or price of the product.

There are nine most frequently produced household vegetable crops in Dar es Salaam, Arusha and Dodoma. The crops are amaranthus, cowpea leaves, pumpkin leaves, sweet potato leaves, tomatoes, okra, eggplant, Swiss chard and Chinese cabbage. While temperate vegetables (cabbage, cauliflower and tomato) are considered important as commercial crop in Arusha, Mbeya and Lushoto. Fruits widely produced include banana, papaya, citrus, mango, guava, passion, pineapple, annonas, plums, grapes watermelon, avocado, coconuts, and pomegranate. Rice, maize, cassava and sweet potato tubers are also produced for subsistence.

Economical urban agriculture normally includes livestock production which is undertaken by middle and well off class of the urban residents. The major animal species kept include dairy cows and poultry. Other species including pigs, duck and goats have their share in the economy, albeit a limited one.

Production technologies

Agriculture production in urban areas is still taking the form of the rural production. This is because land is still available. Simple Irrigation techniques like bottle and bucket irrigation have been adopted in areas where irrigation water is scarce.

Organic farming is widely used in most urban areas of Tanzania. The use of animal manure; composting of the organic fraction of urban solid waste, and the use of liquid manure and natural pesticides are now common practices in

vegetable production. Other more complicated technologies have been introduced but have not spread due to farmer financial limitations.

In livestock production, intensive production of dairy cattle under zero grazing with cut and carry-feeding management is the most popular practice while intensive poultry production under deep litter system is very common.

Production inputs and Seeds

Plant seeds and planting materials for most of the crops grown in the urban areas are available in input shops. Approximately 80% of the farmers in Dar es Salaam buy vegetable seeds from input shops at Kariakoo central market. Seeds of commonly grown vegetable amaranthus are locally produced and supplied to major urban centers. These seeds are sold in a 500ml bottle (about 400g per 0.5 lts bottle). Other propagation materials (e.g. cuttings and seedlings) are locally produced in the neighbourhood. The access of these seeds by most of small-scale urban farmers is the limiting factor as they are packed in large quantities.

Artificial insemination is widely used to upgrade dairy breeds. Poultry hatcheries supply high breed chicks.

Pesticides and animal drug

Plant protection in urban areas is normally done through preventive cultural control due to financial constraints facing the urban farmer. In rare cases natural pesticides are used to control pests. This is not the case in commercial production. Use of pesticides is an important management practice to avoid losses. About 27% of the farmers in low-density neighborhoods use pesticides, mainly insecticides and fungicides for controlling insect pest and fungal disease respectively. Animal drugs especially acaroids and antibiotics are considered important in the production.

However, control of the major as well as minor pests can be through Integrated Pest Management (IPM) measures. In Tanzania drip irrigation and green houses are not used as plant protection measure in vegetable and fruit production but are only used for cut flowers in Arusha and Kilimanjaro regions.

Manure and waste management

In most of Tanzania's cities both horticultural and livestock production are components of agricultural production. The nature of urban production systems offers opportunities to recycle nutrients and channel them from one agricultural activity to another. Manure from urban livestock keeping especially poultry production serves as the major supplier of nutrient/fertilizer for horticultural production.

Composting of the agricultural by – products like stocks of vegetables together with by – products of livestock as well as decomposable parts of solid waste on a small scale provides an opportunity for recycling of urban solid waste for the improvement of the urban environment.

In studies commissioned by the Japan International Co-operation Agency (JICA) in 1997 and later by the Dar es Salaam City Commission in 1998 it was established that the organic fraction of household waste and market waste amounted roughly to 1,200 tons per day, which if processed, would give between 500 – 700 tons of compost daily.

In commercial vegetable production sites, inorganic fertilizers are used during rainy seasons. About 20% of farmers in Dar es Salaam use inorganic fertilizers.

Water availability, quality and cost

Seasonal production, which is more prominent in highly populated, unplanned and peri urban areas, depends on rainwater. Although water sources in urban areas are available, the access and reliability of water tends to be a major constraint in urban agricultural production. Some of the shallow wells dry out during the dry season. Surface water remains to a large extent a reliable source of water. Worries on the quality of surface water limit the production in some areas. A study carried out in 1998 revealed that quality of surface water in mot of the urban areas producing horticultural crops falls within the recommended quality for irrigation water. Another positive factor is that the nature and type of vegetables produced in urban areas are short lived, which provides limited chances of absorbing hazardous elements, if any.

Tap water is used in some of the home gardens and livestock production systems when available.

Access to land and land tenure

Land, among many other factors, contributes to the flourishing of urban agriculture Tanzania's urban areas. Most of the urban areas still have plenty of intra urban open land (government, hazard and undeveloped private land), that can be used in short, medium, and long – term urban agriculture. However land tenure has been a major constraint in towns where the existing plans do not accommodate urban agriculture. Illegal land use (hazard lands, government land) and insecurity of land use (informally given private land) makes agricultural production on urban open space a high risk venture to invest in. Where informal agreement between farmers and landowner on the land use exists, this offers

relative security on the producer's side. This is even more the case in low-density home gardening as well as in peri urban agricultural and livestock production systems where farmers themselves own the land. In rare cases some kind of rent is paid for the hired land, but usually such rent is minimal.

Training and Extension Methodologies Applied

Institutionally, the extension services are under the portfolio of the Ministry of Agriculture and Food. Under the present decentralized system the agricultural extension workers are employed and managed by Local Government authorities under the overall direction of the Presidents Office, Regional Administration and Local Government. Extension workers are expected to train and visit farmers, under Training and Visit system. Usually farmers do not go out to seek for assistance; rather they wait until the extension staff came around.

The Dar es Salaam Municipalities have strengthened the extension structure by introducing participatory extension approach which puts emphasis on capacity building and organizational support. In this approach target groups participate in their situation analysis and planning, while the extensionist act as facilitators.

Categories of urban farmers:

Urban farmers are perceived to be much diversified in social structure, to come from all the socioeconomic groups, and to include some recent migrants, as well as more established ones. Cutting across broad socio economic, ethnic, educational, and occupational statuses, the urban farmers in Dar es Salaam include professionals, administrators, government officials, married women, single mothers as heads of households, students, casual labourers, the unemployed, and part and full –time workers.

The fact that urban farming involves such a complex mix of operators implies that urban farmers are not socially marginal as is often assumed. This is because Urban Agriculture

- plays a key role in urban household survival in all social groups
- supplements daily food expenditures by saving money to buy other basic items, and
- creates employment for the jobless.

Importance Of Urban Agriculture For The Household And City Economy

Urban agriculture is recognized in Tanzania as one of the important informal sector opportunities for urban dwellers. Urban Agriculture has proved to be one

of the survival strategies for all social classes to cope with declining standards of living. It provides equal opportunities of employment and provides an important source of income to a cross section of the urban residents.

It is estimated that about 28% of the urban households get their income from agricultural production. It is a reliable source of income, since it can be obtained weekly; provides capital for other projects/enterprises and for secondary activities like sale of fresh fish and enables participants to meet social obligations like paying school fees, medical bills etc. In addition, urban agriculture supplies household with quality vegetables for consumption.

Home gardening in both high and low density areas provides a number of other benefits, as it:

- Increases direct and physical access to food when money is scarce;
- Creates a tangible income through savings on food and sales of surplus; and
- Ensures a more balanced diet for urban poor with limited purchasing power.

Processing of Urban Agricultural Products

Little processing of urban agricultural products has been done in Tanzania. Few factories in rural areas are processing fruits and limited varieties of vegetables. There are many reasons for this minor involvement in processing; among them is the limited and unreliable supply of agricultural raw materials to the processing factories which has in the past forced some of the factories to close down or to work below their capacity. In urban areas there has been limited effort in processing of horticultural products, but as in rural areas, agricultural processing has been constrained by erratic supply of the agricultural raw materials and lack of capital.

Economic value of Urban Agriculture for Town and Cities

The economic value of urban agriculture is expressed by:

- Enterprises range from low-income informal businesses (home gardening, open space and peri-urban), to producers of market products to large agribusiness corporations (input supplier).
- It strengthens the economy of the urban areas; as it is an industry on itself, which include production, processing and marketing activities, which provides employment to urban dwellers. Although processing is done on a small scale, large numbers of individuals are involved in it (Mama Lishe =small scale food vendors);

- It is an easy and common entry point for marginalized women and men in the informal sector (entrepreneurship);
- It diversified the economic base and provides a good buffer against sectoral shocks;
- It provides food of high value to relatively poor urban dweller and improves the access to food for the urban population; and it crates real opportunities for urban dwellers seeking for a livable existence in growing towns and cities.

Full time and part-time farming

Not all urban farmers are involved in full time production. The majority of full time urban farmers are found in the peri-urban areas. Full time intracity agricultural production is mostly carried out on open spaces. The majority of the producers, the home gardeners, are part time farmers.

Open space and peri-urban productions are more commercial oriented on medium to relatively large production plots. Average plot size for open space ranges from 700 to 950 square metres and that of peri-urban plots is about 5.1 acre of which 1.6 acres are earmarked for vegetable and fruit production. Open space production with such plot size requires high labour input to intensify the production thus offers full time jobs mostly for men. Although peri-urban production has a commercial orientation, family members and hired labourers do full time production or part time as some of the producer stay in city centers. In this type of farming system more employment opportunities are created when dependants are engaged in economic activities.

Home gardening in high and low density areas of urban centers of Tanzania are characterized by small sized plots ranging from 40 to 80 and 5000 to 800 square metre respectively. Production in this farming system is considered as the most important second occupation. Due to the size of the plots, the production is mainly part time and done by family members. Home gardening is mainly for home consumption, maintenance of social relations and for income supplement through sales of excess produce.

Gender differentiation in the different urban farming systems

About 75% of the home gardeners are women, while more than 85% of peri-urban production is done by men. In open spaces, men form the largest group (90%) of producers with a slight difference between urban centers. Urban gender division of labour is clearly differentiated with the type of farming system.

Open space production is normally a full time job with a lot of heavy physical work that limits most of women participation. In case of home gardening in high-density areas women provide substantial manpower for production; men are

hardly involved in this production system. However, in urban low density and peri-urban areas both men and women participate in the production with no specific task assigned to any of the two. The interest in this production system is the complement of income. Sometimes hired labour is employed. Inputs are organized by the one who is responsible for the production irrespective of the gender.

Access to and control over productive resources and revenues

Land acquisition in most cases is informal. That gives equal chance to all gender to have access to land. Revenues generated from each of the production system are controlled by the responsible gender for production. However women according to the culture are the ones responsible for household expenditure and men have to contribute to the household income. Likewise decision making on production and marketing issues lies, according to the production system, with the respective gender. Both men and women who are involved in the production do marketing.

Current Land Tenure Systems

Low-density housing plots in urban areas are owned by the government, non-government institutions, private people, private companies or religious institutions. Urban agriculture is practiced in backyard of some of the low-density houses as well as on open spaces, which are owned either by the government or non-government institution.

Informal land acquisitions through land markets are generally limited; are below the standard size of the urban residential plots, and are not standardized. In the peri-urban areas people secure land for agriculture through formal government leaseholds and also through a customary tenure without much regard to the planned land uses for future development.

Farmers Organizations

Urban vegetable producers are very individualistic and show a low degree of organization. This is the case for home gardeners as well as peri-urban producers. Intra-urban market producers are grouped around their working area, share resources such as land and water without formal group structures. There have been limited group activities among urban vegetable producers as compared to urban livestock keepers.

The Urban Vegetable Promotion Project (UVPP) has started to support farmer group through training on group formation and strengthening. This training has

resulted in the formation of a number of new farmer groups with proper organizational structure.

Capital for urban agriculture

On the whole intra-city agricultural production does not generate enough returns to facilitate substantial infrastructural investment. Investment in water infrastructure/irrigation equipment is usually made in peri-urban areas where land security and the size of plots allow intensification or expansion.

Subsistence production generates limited monetary returns. In most cases there is no adequate income realized through the sale of vegetable due to the small size of the plots. Access to formal credit is difficult for the subsistence producer due to high interest relates and lack of securities. However gardeners do manage to produce with limited resources as the enterprise can be managed with low capital investment. Besides the insecurity of land and water, lack of technical know- how seems to be an important constraint.

Capital investment in peri-urban areas of Tanzania could play a significant role in agricultural production where relatively large plot sizes and land ownership could provide a good base for collateral, which is not the case in intra urban areas.

Problems Pertaining To Urban Agriculture

Urban agriculture is constrained by various structural and policy problems which include:

a) Constraints arising from Urban Authorities' by-laws which:
   - Limits on the number of animals to be kept within the built up urban areas, and
   - Prohibit of standing crops in urban areas

b) Central Ministries' directives limiting the acreage per person which can be used for agricultural production in urban areas (currently 3 acres per person);

c) Inadequate extension services extended to urban farmers;

d) Lack of marketing support services to urban farmers;

e) Lack of clear policies on productive use of urban open spaces.

Recommendation For Strategy Development

These recommendations are directed to different levels of interventions (national as well as regional/municipal level) and address different actors. Initiatives recommended here have to consider specific features of the intended urban area.

In some urban areas e.g. Dar es Salaam city, some of these recommendations are already being implemented.

President's Office, Regional Administration and Local Government

- Urban agriculture should be accepted as a key strategy for combating poverty in urban areas. Guidelines should be issued to Urban Local Government authorities outlining strategies for promoting sustainable and environmentally sound urban agriculture.
- By-laws which mitigate against sustainable and environmentally sensitive urban farming should be discontinued
- Model Bylaws should be issued to guide agricultural production operations in urban areas.

Ministry of Agriculture and Food

- Technical guidelines should be given to urban local authorities on urban agricultural development issues
- Formulation of environmental standards which need to be observed in urban agricultural production.
- Promotion of Organic agriculture as the most suitable way to produce food in the (dense) urban environment
- Provision of backstopping services to urban authorities and specialized training of extension staff on urban agriculture

Ministry of Lands and Human Settlements Development

- Urban Agriculture should be recognized as one of the land use classes in preparation of strategic urban plans.
- Land access and land use laws should be restructured to allow renewable issuance of short-term titles for urban farming in various categories of public open spaces.

Urban Authorities

Urban Authorities should:-

- Put in place an urban agriculture co-ordination department in urban local authorities
- Provide relevant information to urban farmers on techniques for the enhancement of urban agriculture.
- Link urban agriculture with other urban development issues (e.g. solid and liquid waste management)
- Establish effective linkages between waste management (organic waste) and urban agriculture;

- Design and carry out awareness programs for urban residents, waste collectors and urban farmers on integrated approaches to sustainable urban agriculture.
- Explore the possibilities of using recycled wastewater for agricultural production (including floriculture).
- Subsidize construction of shallow wells and low cost irrigation in urban/peri-urban areas
- Train urban farmers on rainwater harvesting systems for irrigation purposes.
- Encourage formation of urban farmer groups to undertake joint marketing initiatives
- Support local NGOs/ CBOs to run community – garden programs
- Undertake TV/radio programs on urban agriculture
- Establish "Urban Agriculture Training Centres" for urban farmers
- Carry out awareness seminars for local government elected leaders and local government officials on urban agriculture
- Involve groups involved in urban agriculture in the development of strategic and specific Urban Development plans.
- Provide financial support to groups involved in urban agriculture through revolving fund mechanisms.

Concluding Remarks

Urban farming as a basic urban function is recognized in Tanzania not only as a survival strategy for the urban poor but also as a significant contributor to urban food security and as a dependable means of enhancing household earnings.

Involvement in informal activities is expected to continue to be the main strategy for the unemployed, the low wage earners and men and women without sufficient skills, who live in urban areas. Amongst these informal activities urban agriculture is expected to continue to be the main fall back position for this category of urban residents.

The Tanzanian Government recognizes the potential that urban agriculture has for facilitating sustainable human development in its cities and in the national goal of combating poverty. For these reasons the Government of Tanzania will continue to create required enabling legal and institutional framework for its sustenance in all urbanized areas in the country.

Annex 6: Urban Agriculture in The Republic of Zimbabwe – By Dr Vincent Hungwe

Introduction

- Urban agriculture in Harare and other cities dates back to the 50's
- **1955 – 267 ha (Harare)**
- **1994 – 9 000ha (Harare)**
- Household activity where some householders grow own vegetables and rain fed crops for own consumption
- Commercial farming activity on large residential properties zoned for (peri) urban farming activities such as growing vegetables, fruits, maize, potatoes, livestock products etc.

Types

•On-plot – subsistence

•Off-plot – subsistence and marketed output

Location of off-plot

- Takes place on
    - open spaces reserved for future use in residential areas,
    - commercial and industrial areas,
    - along river banks,
    - catchment areas of dams and other waterways,
    - along road or railway reserves
    - hills

Regulatory Framework

The Regional, Town and Country Planning Act gives power to local authorities for local development planning (preparing local and master plans and issuing of development permits,

-Section 22 Sub-section (b) paragraph (iii) of act states that the use of urban land for agricultural activities does not constitute land development. In essence use of urban land for agricultural activities is not recognized as urban land development.

Regulatory Framework 2

- In the Urban Councils Act (1995), Section 235 (1) (j) gives the Responsible Minister authority to formulate regulations to prohibit or regulate cultivation in local government areas.

- While the Act gives power to local authorities to make their own by-laws, these by-laws should not contravene the main Act.
- The Stream bank Protection Regulations (Natural Resources Act, 1975): This proscribes cultivation within 30 metres of a stream to prevent silting into water systems
- The Water Act (1974), which forbid riverbed cultivation in the dry season to reduce silting and downstream erosion when the river resumed flowing.
- There is no clear legislative instrument against, or in support, of plans relating to urban agriculture.

Dimensions of UPA

- Socio-economic
    - employment, incomes, poverty reduction (ESAP)
    - Low returns on inputs invested
    - Nutritional balance
    - Gender
- Ecological
    - Soil erosion
    - Chemical pollution
    - Stream bank and wetland – siltation
    - Species diversity and tree presence
    - Flooding of drainage systems due to clogging
    - Improper utilization of pesticides (DDT)

- Institutional
    - MLGPWNH, MLARR, MRRWD, MET, MHCW, MPSLSW…..
    - Urban local authorities (delegate)
    - Instruments – master and local plans in relation to regulatory framework
    - NGOs/CBOs – research to demystify UPA e.g. Musikavanhu Project (Budiriro) Women and Land Lobby Group, CGHRA
    - Research institutions – UZ,
    - Private sector – seed companies – Panner, Zambuko Trust

Definition of UA

- ENDA – *'The production of crops and livestock by urban households for consumption and the urban market…it is an informal activity as most practitioners do not follow legal procedures in acquiring land'*
- Mbiba – '*the production of crops and/or livestock on land which is administratively and legally zoned for urban uses.'*
- Smit et al – *'An industry that produces processes and markets food largely in response to the daily demand of consumers within a town, city, or metropolis on land and water*

dispersed throughout the urban and peri-urban area applying intensive production methods using and reusing natural resources and urban waste to yield a diversity of crops and livestock'

Emerging Issues

- Emergence of consensus on need to recognize and integrate UPA into planning and development of urban economy
- The need for consensus on the nature, scope purpose and place of UPA in national economic development – issue of definition
- Harmonization of policies and enabling legislation that provides framework for by-laws and UPA practice by local authorities
- Identification and harmonization of instruments in support of UPA – extension package, environmental management, financial support, water management, tenure security
- UPA vis on-going national agrarian reform – conflict between urban expansion and peri urban agriculture.
- Solution – creation of space for agriculture as legitimate land use and recognition of land use intensity

Annex 7: Urban Agriculture and Urban Environmental Challenges – By Crispen Maseva

Introduction

Urban agriculture is an important socio- economic activity for the urban poor particularly for the developing countries. The activity's contribution to food security and income generation for the poor families is well recognised and evident from the body of available literature. Given that it is largely poverty driven (Mbiba, 1995), the deteriorating socio-economic environment in most developing countries coupled with the rapid rates of urbanisation are factors likely to push the magnitude of the activity to unprecedented levels in the near future. Formidable challenges associated with it now and in the future have to be addressed. Key amongst them is its impact on environmental sustainability.

To discuss the strategies required in dealing with the environmental challenges, this paper is divided into two sections. The first section puts the issue of environmental challenges into perspective by highlighting some of the major concerns associated with the practice, using examples drawn from the SADC

Region. The second section outlines the range of possible practical strategies that can be employed in dealing with the problems.

The Growth of Urban Agriculture in Harare

Harare has experienced phenomenal expansion in the area under cultivation ever since the practice was first noted in the 1950's. Table 1 below shows the growth trend since 1955.

Table 1: Extent of Cultivated Public Land in Harare: 1955-1994

Year	Area of Public Land (ha)	% of Open Space
1955	267	1.0
1969	1066	4.0
1972	1399	5.5
1978	3696	14.0
1980	4762	18.5
1990	4822	19.0
1994	9288	36.0

Source: Bowyer-Bower, Mapaure and Drummond (1995)

The above statistics clearly demonstrate that urban agriculture has been expanding over the years. In particular, the expansion registered from 1990-1994 was exceptional and has been attributed to the economic hardships brought about by the Economic Structural Adjustment Programme (ESAP) (Masoka, 1995). Similar expansions related to economic hardships were witnessed in Lusaka during the peak of the economic crisis experienced in the late 1980s (Mbiba 2001) and in Dar es Salaam due to increasing poverty resulting from decreased formal employment (Kitilla, Mlambo, 2001).

A number of environmental problems have accompanied the expansion of urban agriculture in Zimbabwe. The increase in the number of people participating in the activity has inevitably caused a shortage of suitable land resulting in farming spilling over to environmentally marginal areas (hill slopes) as well as sensitive environments (wetlands, water ways and river banks). Surveys conducted in Harare to determine the extent to which crop cultivation has encroached on areas that are considered sensitive and therefore unsuitable for cultivation have produced the following results:

Table 2: Illegal Cultivation in Sensitive Areas- Harare

	% Cultivated
Hill slopes and other sloppy areas	20
Within 30 m of Rivers	15
Wetlands	25
Other Open Spaces	40
Total	100

Source: Department of Natural Resources, 2002

The potential negative ecological impacts associated with the cultivation of these areas have not been investigated fully but can be significant. Cultivation on slopes and hillsides without conservation works is particularly worrying in view of the amounts of soil movement that can be triggered. Already there are worries that the amount of soil being moved by agriculture in Zimbabwe is exceptionally high and does not compare favourably with that caused by other economic activities like mining (Table 3)

Table 3: **Land Degradation Due to Mining and Agriculture in Zimbabwe**

sector	**Mass Movement (Million Tonnes per year)**
Mining (Medium –Large Scale)	60
Mining (Formal Small Scale)	10
Mining Alluvial Panning)	15
Total for Mining	**85**
Farming- Resettlement and Communal	752

Source: Adapted from Ministry of Environment and Tourism, 1998 (State of the Environment Report)

Given the high volumes of soil movement associated with farming, the occurrence of urban crop cultivation on sloppy ground susceptible to massive soil movements is a cause for concern. What is more worrying is the fact that approximately 80% of

the cultivated sloppy sites within urban and peri-urban areas have substandard soil conservation works or do not have such works at all (DNR Survey, 2002).

The removal of vegetative cover on these sloppy areas in the process of opening up agricultural plots exposes the slopes resulting in the generation of large volumes of runoff. Apart from causing erosion, runoff accumulates in surface drainage systems and often causes the flooding of residential areas and public infrastructure in low-lying areas. The perennial flooding of parts of Houghton Park in Harare can in part be attributed to the runoff generated from the clearance of vegetation for various activities, include farming.

Research on wetland cultivation conducted in Zimbabwe revealed a marked distinction in bio-diversity composition between cultivated and non cultivated wetland areas (Bowyer- Bower, et al, 1995). Continuous cultivation without proper management practices as is currently the case leads to soil degradation and eventual drying up of the wetlands. There is therefore need to ensure that these wetlands are conserved and utilised in a sustainable manner in line with the requirements of the Ramser Convention. The current utilisation of these areas in both urban and communal farming areas put them at high risk of degradation.

Urban farmers are increasingly applying agro-chemicals to improve soil fertility as well as control pests. In Harare, it was found that up to 88% of households engaged in open space cultivation use chemical fertilisers on their crops and in most cases tend to apply more fertiliser per unit area than would happen if plots were bigger (Masoka, 1995). Since urban farming is done largely by farmers who do not receive any extension services, the abuse of chemicals can be detrimental not only to the soil but also to the city's water bodies through pollution.

Addressing the Environmental Challenges of Urban Agriculture.

In view of the negative environmental impacts associated with urban agriculture, there is need to develop and implement strategies that minimise the associated risks without compromising the food security of those who depend on it. Two categories of strategies can be used, the technical and the non-technical strategies;

Technical Strategies

Environmental Assessment

Environmental assessment is a broad concept which aims at identifying and evaluating both the negative and positive impacts of activities with a view to developing mitigation measures for the negative ones.

Most countries in the East and Southern Africa region already have fully developed environmental assessment processes which are supported by legislation. The application of the EA process to agricultural activities can effectively identify and evaluate the negative environmental and health impacts related to agricultural activities in urban and peri- urban areas. Appropriate mitigation measures and monitoring mechanism can then be put in place to ensure that impact on the environment are minimised.

Strategic environmental assessment is another form of impact assessment which focuses on the evaluation of the environmental impacts of development plans or the cumulative environmental impacts of a number of small scale activities falling under the same category. The impacts of rearing livestock in the urban areas or those of crop cultivation can be identified and evaluated. The strength of the EA process lies in its ability to prescribe environmental management actions for the environmental impacts of activities. It enables the identification of impacts and their elimination or mitigation.

Resource Inventorying and Profiling

Inventorying and profiling of environmental resources are techniques for determining the resources available in a given area, their location and physical conditions (Martin, et al, 2001). These techniques are supposed to be the starting point for ensuring the environmental sustainability of agricultural and other economic activities.

The techniques are better accomplished through the use of remote sensing whereby satellite images or aerial photographs for the urban area in question are analysed to generate a Geographic Information System database. The database could show all the areas where environmentally sustainable urban farming can or cannot take place. It has the capacity to show areas where soils may not be appropriate for particular activities the urban farmer may want to engage in. Inventorying has the potential to make urban agriculture more viable and sustainable.

In view of the fact that significant proportions of sloppy areas are increasingly being utilised for crop cultivation, the construction of mechanical conservation works becomes a necessary strategy to control the environmental problems associated with run-off. Different forms of these mechanical works can be used. Terracing is particularly suitable for the hillsides while contour ridges and stones checks can work in areas with slope angles of up to 13 degrees.

The provision of extension services to urban farmers has to be promoted in view of the fact that the farmers are using chemicals in their operations. Extension work can focus on means of reducing reliance on chemicals. Integrated pest

management techniques have to be introduced to the farmers as one way of ensuring that farmers reduce the amounts of chemicals they use.

Non Technical Strategies

Policy and Legislative Changes

Currently urban and peri-urban agricultural activities remain illegal in most of the countries in the East and Southern Africa region. The illegal status of the activity makes it difficult for farmers to get technical support services including environmental and agricultural extension services. Since the farmers themselves are aware that their operations are considered illegal, they are usually not at liberty to seek assistance even when they observe negative environmental trends associated with their activities. Urban agriculture has to be accepted as a legitimate form of urban land use.

Organising Farmers into Recognisable Groups

The impacts of urban agriculture on the environment are often worsened by the fact that each farmer operates independently and in whatever area unutilised land would have been found. The result is a situation whereby land is inefficiently utilised and the environmental effects of farming operations are spread over an unnecessarily large area.

When farmers are organised into groups, it becomes easier to access and communicate with them on issues related to environmental conservation. A culture of responsibility for the environment in which the farmer operates is easier to build when the farmers are organised into groups than when they work individually. There are cases where urban farmers have successfully organised themselves into groups. Examples include the Musikavanhu Project in one of Harare's high-density residential areas (Mushamba, 2002), and the General Co-operative Union in peri- urban Maputo (Madaleno and Correia, 2001). The environmental benefits resulting from these organised urban farming groups have not yet been evaluated but the farmers are already receiving extension services from Government Departments.

Engage Farmers in Participatory Planning

Participatory planning is one of the widely used tools for bringing about sustainable environmental and economic development. One of the major drawbacks of the current planning processes in most urban centres is that it is done on behalf of the people being served rather than in consultation with them.

With regards to urban agriculture, a participatory process can be effective when farmers are already organised into groups. Planning for their environment will take them through a process of assessing their needs against the limits of that

environment. An understanding of the environmental limits is critical in environmental conservation. In Dar es Salaam, participatory planning processes were successfully used in assessing agricultural activities in the city and to monitor changes in agricultural land use through periodic updates (Jacobi and Kiago, 2001). Any environmental impacts related to farming are detected early through the monitoring process.

Effective Institutional Co-ordination

The success of environmental monitoring programmes for urban agricultural activities depends on institutional co-operation and co-ordination. Several stakeholders have to be involved. Key amongst them includes Government Departments, Environmental NGOs and the Urban Local Authorities. Ideally all stakeholders should jointly develop and agree on an operational programme which is adhered to and executed together. This reduces chances of introducing activities and programmes that are contradictory.

2.2.5 The success of the various strategies outlined above depends on the political support available to environmental practitioners. Prescribing appropriate conservation works in a particular area often requires that certain activities be discontinued. Those affected by such decisions naturally become bitter and often seek the support of politicians. The environment has been the biggest loser in cases where this has happened. Where there is scientific evidence that certain activities will impact negatively on the environment, there is need for politicians to support the environmental cause.

Conclusion

The environmental impacts of urban agriculture are diverse. Most of them emanate from the fact that the activities take place in unsuitable areas. Current trends show that the number of people engaging in urban agriculture will continue to increase thus increasing the demand for agricultural land within urban and peri-urban areas. This calls for the adoption of practical strategies capable of addressing the anticipated escalation of environmental problems. Environmental impact assessment, participatory processes and inventorying are among the strategies that can be implemented and achieve positive results for the environment. An approach that uses a combination of these strategies is likely to produce better results than one which focuses on a single one.

References

1. Bowyer-Bower, T.A.S, Mapaure, and Drummond R.B (1995), 'Effects on the Natural Vegetation of the Cultivation of Vleis, Case Study of Urban Agriculture in Harare'. Paper Presented at the Workshop on the Environmental, Social and Economic Impacts of (Illegal) Urban Agriculture, August 30-31 1995, Harare.

2. Department of Natural Resources (2002), Unpublished Report on the Extent of Urban Agriculture in Harare.
3. ENDA-Zimbabwe (1994), 'Urban Agriculture in Harare', ENDA-Zimbabwe, Harare.
4. Jacobi, P. and Kiogo,S. (2001), 'Different ways to Monitor Urban and Peri-Urban Agriculture in Dar es Salaam, Tanzania' Urban Agriculture Magazine Number 5, December 2001.
5. Kitilla, M.D. and Mlambo, A. (2001), 'Integration of Agriculture in City Development in Dar es Salaam,' Urban Agriculture Magazine Number 4, July 2001.
6. Madalemo, I.M and Correia A.M (2001), 'Alleviating Poverty in Maputo, Mozambique', http://www.cityfarmer.org/Mozambique.html~Mozambique
7. Martin, A., Oudwater, N and Gundel, S (2001), 'Methodologies for Situation Analysis' Urban Agriculture Magazine Number 5, December 2001.
8. Masoka, M. (1995), 'Urban Agriculture in Harare:An Overview' Paper Presented at an International Workshop on Urban Agriculture', 30-31 August, 1995, University of Zimbabwe
9. Mbiba,B. (1995), Urban Agriculture in Zimbabwe: Implications for Urban Management and Poverty, Avebury, Ashgate Publishing, London
10. Mbiba,B. (2001), 'The Marginalisation of Urban Agriculture in Lusaka' Urban Agriculture Magazine Number 4, July 2001.

Annex 8: Access to Land, Water and other Resources for sustainable Urban Agriculture – By Takawira Mubvami.

Takawira Mubvami is the Scientific Project Coordinator for a Project on Access to Land for Urban Agriculture by the Urban Poor. The Project is financially supported by the International Research Centre – Cities Feeding People Programme. This paper is informed by preliminary work from the research in three countries, namely Tanzania, Uganda and Zimbabwe. The Ministers Conference presents a splendid opportunity to bring to the attention of Policy Makers the salient issues that the project is addressing.

Introduction

The increasing growth and production of food and other agricultural products in urban areas, known as urban agriculture, has been mainly attributed to the increasing number of people practising it and to its contribution to the sustenance of some sectors of the urban population in developing countries, with Eastern and Southern Africa not an exception. It can even be said that the practice is increasingly becoming an important activity in urban economies to the extent that, if well managed, it will contribute significantly to the well being of urban dwellers both the rich and the poor.

Urban agriculture has been embarked on mainly as an urban poverty alleviation strategy and studies have revealed its benefits to those who practice it and to the wider economy (Mbiba 1995), Mougeot. It is a reality that urban residents embarked on Urban and Peri-urban Agriculture (UPA) as a direct response to the consequences of structural adjustment and economic reform programmes that were introduced by the World Bank and the International Monetary Fund in the 1980s and 1990s and other forms of economic hardships.

It can not be denied that some of adjustment programmes brought about massive poverty. People engaged in UPA in response to inadequate, unreliable and irregular access to food supplies, partly due to diminishing purchasing power (Rafa and Nasr, 1999 in Mougeot : 1999). It is because of these reasons and many others that we have seen the vast growth of the practice of UPA.

UPA, like all other agricultural activities is dependent on a number of critical key resources. These include land, water, inputs like seeds, fertilisers etc, financial and human resources. Of these resources Baumgartner and Belevi (2001) point out that of all these resources, access to land and water are that most crucial for the urban poor to be involved in UPA. Soonya Quon (1999) confirms that land use issues, specifically availability of land , access to land and usability of land are of particular concern to urban farmers.

Little importance has been given to UPA. Resources are generally allocated to rural and commercial farming and not UPA. This has resulted in low productivity in urban areas as UPA has been neglected in these areas. This paper will discuss critical urban agriculture issues which need to be taken on board in the development of an urban agriculture policy with regard to access to critical resources like land, water and finance as it forms the epitome of the political economy of urban agriculture. Mbiba (2001) defines this political economy of urban agriculture as the regulation, management and control over access to resource inputs for the practice of urban agriculture. It is the task of this paper to unravel this problem of resources for sustainable UPA. This paper starts by discussing critical concepts that are pertinent to resource allocation for UPA in the region and then tackles the issues of land, water and financial resources in relationship to these concepts before ending up by proposing a menu of issues to be considered in ensuring the adequate allocation of these resources in UPA policies. Policy challenges should be focused on making these resources available in right quantity, quality as well as on right locations. They should be targeted to the right beneficiaries.

KEY CONCEPTS FOR CONSIDERATION FOR RESOURCES

There are three key concepts that influence the allocation of resources for UPA. These are:

- availability
- access
- quality/quantity of the resources.

Availability refers to the existence of the resources. The critical question to ask is whether the resources are available or not. If the resources are not available, then they may have to be made available as a starting point before they are distributed. Accessibility refers to the distribution of the resources. Who gets or benefits from the resources is an important issue for policy. Deliberate targeting may be important to ensure fair accessibility to resources. The issue of how resources are accessed is also equally important. In some instances there are no formal ways of accessing resources like land for UPA and so policies will have to address this issue. The quality or quantity of resources may influence the usability of the resources. Accessing the right amount of water resources with the right quality will ensure sustainable UPA.

LAND

Land is crucial resource for urban and peri-urban agriculture. It is important not only because it's a resource of fixed supply, but also because it is a robust resource

whose access and control gives the beholder power. As stated above, availability of land, access to it and its quality are of particular concern to urban farmers (Soonya Quon; 1999) and these remain key issues in urban and peri-urban agriculture.

Availability

A critical resource for UPA is land. Unfortunately there are several conflicts between urban agriculture and urban land use. Firstly there is 'on-plot' urban agriculture. On-plot agriculture is that which is done within the 'pegged' residential stand (Mbiba, 1995). On-plot cultivation is dependent on the availability of space on each individual property. Residents on any property have automatic access to the space for uses such as cultivation. In terms of urban management, this form of agriculture is only problematic if the residents engage in livestock production, poultry etc. where such activities generated nuisance in the form of noise, smell and possible health hazards (Mosha 1991). On-plot cultivation is generally not viewed as offensive by local authorities.

On the other hand there is the off-plot category which has the largest percentage of UPA and it remains the most problematic area in terms of availability and accessibility. Available land for the practice generally includes open spaces, vacant council or government land or land earmarked for future development. In this case, land is perceived to be 'public' land and anybody can utilise it without claiming individual title ownership of the land. Mbiba (1995:26) says urban cultivation covers almost all areas in the cities, namely open spaces in both rich and poor residential neighbourhoods, industrial areas, road and railway reserves. It is not always guaranteed that engaging in the UPA on such land will result in a good harvest or product due to conflicts with the local authorities or other land owners who may want to utilize the land for 'appropriate' urban related uses.

Within the city boundaries, in all urban areas of Zimbabwe, residents cultivate on open municipal land and undeveloped land intended for residential development and other uses. The open lands include stream banks, vlei areas, road and rail reserves and open land reserved for recreational and other purposes.

UPA areas are highly contested spaces and this creates conflicts between different stakeholders over access to land and other resources as pointed out by Mudimu. (Mudimu: 2001). In some cities, conflicts occur between the urban farmer and local authorities mainly because of the latter's adherence to the implementation of policies controlling the cultivation of public land. These conflicts occur where local authorities view UPA as demanding a significant proportion of urban space and having negative environmental impacts while on the other hand the cultivators content that it provides opportunities for them to improve food security and cash income (Mudimu: 1996; Mbiba: 1995). This has led to UPA being perceived as a low return and temporal activity.

Land that is utilized for UPA has faced too many pressures from other urban uses and could not be spared from urban rapid growth either. Land is both a community asset and a commodity. As a community asset land is valued for open spaces, for infrastructure, for social housing, for public institutions and cultural buildings. As a commodity, owners value land because it is an excellent way to make money if invested in property. It is therefore an important element in nearly all urban development programmes including the development of infrastructure and provision of services. This has led the issue of nexus of the general land availability for urban development and UPA in most African cities to be central to urban planning.

In Eastern and Southern Africa, there are very little attempts to make land available for urban agriculture. Local authorities view UPA as demanding a significant proportion of cities' land and having negative environmental and health impacts. These are considered as impacting negatively on quality of urban life, contributing to some decline in the aesthetic quality of urban space and increasing costs of urban environment management. It is also evident that there is no clear legislative instrument in support of plans relating to urban agriculture. Attempts should be made to regulate and make land available for UPA.

Access

One of the major problems emanating from the incorporation of urban and peri-urban agriculture into the urban landscape is that urban and peri-urban areas are in the hands of a limited number of people creating very fertile grounds for conflict both among individuals and other competing use of the land. As such access to land and other resources for urban and peri-urban agriculture is difficult and this impacts negatively on the viability of the activity.

Access refers to who gets land or who uses that particular piece of land and it is greatly linked to tenure system. Land tenure can be defined as the mode by which land is held or owned or the set of relationships among people concerning the use of land and its product. It is the basis upon which rights of ownership in land are exercised, including the modes/ forms of land ownership as governed by a system of rules and procedures. Land tenure systems vary widely among developing countries and differ from one region to the other within each country and from town to town. In simple terms, land tenure connotes a systematic land holding that embodies legal contractual and communal arrangements under which people gain access to use, utilise and control land resources.

In the urban and peri-urban areas of ESA land ownership and tenure, processes of land transfer and access and the rights to land are complex and dynamic. Land markets and sub-markets are a mix of formal and informal transactions, some of

which are not well understood. There exist various ways in which land is actually accessed for urban agriculture. Some can be referred to as formal and others as informal (Maxwell: 1995). Formal means of accessing land includes inheritance, purchase and leasing. The most common form of agricultural land usage on private land is simply the owner of the plot cultivating his or her own land. However though, owners of land often permit others to cultivate unused land through lending arrangements an in some instances squatters often simply cultivate unoccupied land.

Initial results from a study on accessing land for UPA in the region carried out by MDP indicate that borrowing, squatting and renting are some of the informal means of accessing land for urban agriculture. The majority of land for urban and peri-urban agriculture is accessed informally.

There is a lot of ambiguity that surrounds land tenure in urban and peri-urban areas. This has tended to create conflict situations , for example in Kenya, land in peri-urban areas is predominantly under freehold land tenure systems, with land acquisition being mainly through inheritance governed by customary practices (Olima:2001). In Malawi the land falls under the traditional freeholds. Since the land in the city's periphery is owned communally, there is no proper planning of developments due to limited controls and planning guidance.

Insecurity of land tenure is a common phenomenon in most of the countries of ESA. Because of the difficulties in accessing land formally, farmers lack collateral security and this result in low investment on their pieces of land.

Urban and peri-urban agriculture is also a gender issue. There should be gender considerations in the access of land and other resources. Usually with men away seeking work during the day, the women stay at home and are in a position to manage the family's agricultural initiatives.

Mbiba (1995: 102) states that, "despite the observed dominance of women in urban agriculture, no protracted attempts have been made in terms of research to analyse or give insights on women's life as urban agriculturists. Also assessed by Freeman (1990: 18), writings on African urbanisation have propagated opinions which view urban cultivation as an "unimportant pastime indulged in purely by city housewives". There is a vicious cycle which trivialises both UPA and women's economic contribution in general. The same problems can be said on the impacts this can have on the distribution of benefits of UPA.

In Kenya most urban farmers are women and the same can be said of the other Eastern and Southern African counties. It is reported that 66% of the households without access to urban and would like to have access to land where they can

grow their own food. (Olima, 2001) Such households hoped to get this land through being allocated idle/vacant land while 12% indicated that they would buy their own land. Modifications of land tenure arrangements in peri-urban Nairobi have subjected land to market operations of supply and demand, and with the urban land market imperfections, the result has shown uncoordinated and sub-optimally developed urban land. Women due to their underprivileged position are usually found without land or lacking security of tenure and this impacts negatively on their food security.

It can also be said that the rising cost of urban land and other factors deterring access of urban land prevent persons living in poverty and members of other vulnerable and disadvantaged groups from gaining access to suitable land. It seems access to land for UPA for HIV/AIDS affected households has not been considered in ESA. Poor people in many areas have often been displaced in the peri-urban zone particularly in areas where there is a mix between traditional and modern tenure.

In other cities in the ESA, peri-urban land tenure dynamics have also been experienced in the urban areas of Malawi, Tanzania and Uganda. In these areas too, the poor urban residents in general and poor women in particular are usually found without land and lacking security of tenure. Elsewhere Saruchera (2001) noted that an influx of formerly urban residents to the peri-urban residents to the peri-urban areas of Harare has led to confusion over authority to allocate land and approve leases and permits. This has consequently led to land-use conflicts in the peri-urban areas and this threatens the viability of the agricultural sector since the considerable quantity of the horticultural products consumed in Harare comes from the peri-urban fringe. The poor tend to be displaced in areas where there is a confusion of ownership between traditional or modern tenure.

Quality

Land quality generally refers to the characteristics of the land that is available or accessed. As earlier stated, most of the land made available for urban and peri-urban agriculture include open spaces, areas earmarked by the local authorities for the future development, road and railway reserves. Not all of these areas tend to be suitable for urban agriculture. It has been discovered that many vacant lots on which urban agriculture takes place may not be suitable for urban agriculture.

Some of the areas which have been used for urban agriculture by farmers, which in turn had proved to be problem areas, include wetlands, water courses, hilly areas and special habitats. Because water is a very much needed resource for urban agriculture, most farmers have occupied land close to streams, rivers and even dams. This has allowed them to access water easily. Hilly areas have not been spared either as farmers and poor urban inhabitants look for space for cultivation.

In Harare, a sharp increase in urban agriculture has led to most of the hilly areas to be stripped of their natural vegetation and to be used for cultivation. The same can be said of other areas of special habitats.

It has been noted that utilization of such pieces of land creates environmental management problems. Cultivation close to water courses has brought dangers of siltation and water pollution through the use of chemicals. Stream bank cultivation has been strongly prohibited by several local authorities in many countries, but many farmers seem to ignore the order. Cultivation in hilly areas and special habitats has also resulted in land degradation and massive cutting down of trees. All this has resulted in many environmental problems.

A lot has to be done to preserve the environment and this also points to the need for a sustainable UPA backed by policy. Authorities should prohibit farmers from cultivating in areas that are not suitable for farming. Land audits will guide zoning in which land not suitable will clearly be identified. Environmental guidelines should also be made on the utilization of land and the use of ecological techniques to enhance soil fertility should be encouraged.

Policy Issues for Land

The critical solution for land is ensuring security of tenure to minimize the risks associated uncertainty. This can be done through a number of strategies.

- Lease arrangements – this entails entering into an agreement with the owner of the land in terms of the time span during which agricultural activities can take place. This allows the farmer to carefully plan the level of investment they want to plough into the venture.
- Accessing institutional land – Some institutions like churches, schools and government have large tracts of land within their boundaries. Arrangements can be made to have the urban poor accessing this land and utilizing it for UA
- Guaranteeing access for a definite period – this can be done where land is available. However, targeting will be important. Access can be guaranteed for a particular group of beneficiaries. These could be women, youths or other disadvantaged groups.

WATER

Like any other input in urban and peri-urban agriculture, water is one of the most important inputs which should be made available to the farmers. Major sources of water include waste water, ground water, tap water and rain water. Problems have been encountered in Eastern and Southern African countries over the accessing of water.

Waste water

The use of wastewater in urban and peri-urban agriculture is a widely established practice. Several benefits have been realised in the use of wastewater. Social benefits have been addressed under the notion of the livelihoods generation capacity of waste water agriculture, employment opportunities offered to women through vegetable cultivation thanks to the availability of waste water, and the different layers of society which benefit from it. In this regard effort has to be made to make it available.

The sources of waste water include city drainage canals, spouts from city drainage channels that drain into the fields below ponds and tanks, shallow wells, house drainage spouts and channels etc. the composition of the waste water also varies according to its origin. There is storm water and other urban run-off as well as industrial water, hospital and other institutional and commercial establishment waste water and combinations of these which have contaminants that are related to the source of the water or the processes that it will have undergone prior to being released.

Farmers use wastewater out of necessity and this use is a reality that cannot be denied or effectively banned. However wastewater use for urban agriculture is negatively perceived by the public and government officials. This in turn contributes to the negative image of urban agriculture.

The use of wastewater tends to be restricted in most centres although breakdown of sewers and water mains provides an opportunity for residents to tap on the supplies. Mbiba (1995) says in Harare, Zimbabwe, the Marimba and Mufakose areas are a good case where residents take advantage of breakdowns of the sewer system and use the water to irrigate their maize plots.

It's true that there are several health implications that have to be borne in mind with the use of wastewater. Industrial wastewater may contain a wide range of pollutants, heavy metals being the most well-known example, some of which are not acutely toxic either for the crop, the soil or for the consumer but over time may be damaging to either or all of these.

The main risk for the public arises when vegetable or salad crops grown in untreated wastewater are consumed raw. This practice can be linked to cholera and typhoid as well as faecal bacterial diseases, bacterial diarrhoea and dysentery for the consumers of wastewater irrigated produce. Agricultural workers are also at the risk of being infected either as they are constantly in contact with the waste water.

Policy Issues

Increasingly, governments are interested in urban agriculture for its benefits in the areas of food security, health, environment and employment. It can as well be said that wastewater has been used as an alternative in view of the lack of access to portable water services.

Policies have to be made in relation to the use of wastewater in UPA. There should be standards for wastewater use. In many cases, wastewater is the only source of water for irrigation. Once this reality is accepted, guidelines, standards as well as mechanisms must be developed in the place to decrease the health risks associated with the use of untreated wastewater for agriculture and then the treatment thereof must be promoted.

As part of setting standards for the use of wastewater, irrigation systems should also be revised. Guidelines should outline safe waste application methods and control of human exposure to protect public health. For instance, sprinkler irrigation should be discouraged. Also where fruit trees are irrigated with treated wastewater, irrigation should cease two weeks before fruit is picked and it should be emphasised that the informal methods of irrigation used by many farmers like watering cans, buckets, water hoses etc, increase the risk of contamination of crops. This is true to contact of water with edible parts of crops.

In line with this, choice of crops to be grown is a very important issue. There is need to examine the types of crops that can be grown using wastewater. These can be trees, cereals, and pastures or fodder crops. Choosing crops to grow in relation to the quality of wastewater is a key factor, because there are large variations in the way plants absorb pathogens and heavy metals. In Zimbabwe sewage effluent discharge from sewage works can be used for grazing, cattle breeding, fish farming, poultry and horticulture on small holdings (Mbiba: 1995). Currently fish farming within the region is done on Lake Chivero, Lake Maclliwane and Lake Robertson.

Monitoring of the use of waste water is important. This will ensure that there is compliance to the waste water standards set. Monitoring will also be important for the types of crops grown using waste water. As has been outlined above, only certain types of crops can be produced using waste water.

Since there are several benefits in the use of wastewater, low cost treatment should be considered an option. There is need to assure treatment of domestic wastewater for irrigation systems which are not restrictive of particular crops. Irrigation methods can be organised into both distributing the raw wastewater to the plants to minimize contamination of the plants, and precautions that the farmers can take to protect their own health. Low cost, appropriate and decentralised treatment technologies can be developed, with the particular users involved. The problem,

which always remains, is the funding of wastewater infrastructure and the maintenance of these. A priority which can be recommended is the 'polluter pays' principle. Both the local industries and the urban population must assume the cost of treating the wastewater they generate. At the same time, farmers must pay for the use of treated water, just like they pay to use fresh or portable water.

Awareness raising on the part of the public is also important. Farmers also have to be educated on the risks associated with using untreated waste water for irrigation.

Ground and Tap Water

UPA farmers can also make use of ground and tap water. Ground water can be accessed through hand-dug wells and boreholes. In Harare and Nairobi, there are areas of the city which are zoned for small-scale agriculture where the original developers created boreholes and wells (Mbiba: 1995). In most cases the areas do not have reticulated water systems.

Wells are very common in both on and off-plot cultivation. The water drawn from the well is poured into a tank and the garden can then be watered by using watering cans transported by hand.

This has several advantages as water quality is usually guaranteed. Ground water is usually clean and not polluted unlike wastewater or running water. Plants are also guaranteed of receiving water. During the rainy seasons, the plants are only watered when it has not rained for several successive days.

The expenses in installing the borehole or the well can be an inhibiting factor to the poor urban majority. Another problem is that there are also environmental impacts which result from the use of ground water. Policies should be made in making water available through sinking boreholes and wells for the farmers.

Unlike the ground water, tap water is usually limited to on-plot cultivation. There are difficulties which can be faced in off-plot cultivation. Tap water, being clean has been restricted for uses like domestic, industrial, commercial and institutional uses. Therefore the use of piped water to agricultural related activities in most Eastern Southern African cities is considered illegal. Though water quality maybe guaranteed the use of tap water tend to be very expensive to poor farmers.

Rain and Surface Water

Most farmers in ESA rely on rain as the main source of water for agricultural purposes. Unfortunately it should be noted that not all areas receive rainfall and have access to surface water. Surface water can be in the form of ponds, lakes and

rivers. There are dry areas which can not access this water and efforts should be made to provide other alternative sources.

Rain-fed agriculture relies heavily on the rain calendar and on the rain distribution during the rainy seasons. This has made urban and peri-urban agriculture to remain a seasonal activity highly dependent on the rains. Most farmers have opted for other alternative sources for survival. This has been dominant on private land where tap water and borehole water can easily be accessed. This has widely disadvantaged the poor who can only depend on the rains.

FINANCIAL RESOURCES

As outlined earlier, more and more people are engaging in UA, creating jobs, improving nutrition levels, providing incomes and alleviating poverty. A key problem to further development of UA is the lack of financial resources. Finance is a big resource which should be incorporated in the policies for UPA. There are a number of sources of finance which have been utilized for urban agriculture by farmers in ESA. These include financial grants and loans, input support, tax incentives, co-operatives etc.

The governments in some cases offer financial assistance through grants and loans. In the long run it can be said that, they are a financial assistance mechanism which has proved to be sustainable. Grants are very useful in situations where the people are extremely poor and cannot raise credit through the formal and informal systems. It has been realised that loans tend to have a number of advantages over grants. Over reliance on grants leads to complacency and can in the end kill the spirit of self –reliance. Loans can be provided at subsidised interest rates, as opposed to outright grants. People are then encouraged to work hard in order to pay back such loans.

Just like offering grants, institutions can come in by providing inputs and this can be from the government, private sector or donor community. Inputs for urban and peri-urban agriculture like seeds, fertilisers, machinery, tractors etc can be offered. These tend to be heavily justified in areas where farmers cannot afford to buy them.

Another form of financial assistance is through offering tax incentives. These are useful in attracting major investors in agriculture and manufacturing. If properly targeted and selected, they can be very effective in creating employment and incomes. Co-operatives have been very common in many farming environments and they have proved to be quite an effective means of getting people started in urban agriculture. The government, donor agencies and NGOs find it better to lend to co-operatives than to individuals.

Just like any other resource in UPA, financial assistance has been difficult to access. Lack of access to credit and investment is recognised by urban and peri-urban farmers themselves as a limiting factor for urban agriculture development. Lack of access to capital to the poorer population involved in UA hinder or shuts off producers' ability to acquire materials, implements and equipment which may increase the returns on labour and investment or to add value through better processing , storage and packaging.

Most existing credit and investment schemes are not accessible by the poor or other vulnerable groups. Poor urban farmers cannot afford the requested collateral or the high interest rates. Initiatives should be made to allow full participation of these excluded groups. Practically, what is apparent is that there are no financial mechanisms adopted for UPA. Most finances are channelled to rural agriculture and agro-industries.

Also of particular importance is that there are no specialised structures to manage credit and financial support systems for UPA. Institutional cooperation is given shape in various forms between for example governments and private banks or between co-operatives and commercial banks. There is need to increase the involvement of the beneficiaries in the management of credit.

UPA can potentially be financed as part of community or urban development programmes and funds as is the case in Botswana shown in Box 1 below. However, specific conditions for urban financial support systems that are aimed at the urban poor and vulnerable groups and that are compatible with UA are required. These include the use of collateral and guarantees that do not require certain physical assets, secured access to land, credit and financial support structures adapted to the specific urban agriculture products and target groups.

Box 1: Financing UPA: The Case Of Botswana

The Botswana government has a long history of assisting the entrepreneurial development of business women and men through various schemes and programmes. It also provides credit in the form of outright financial grants, loans, in puts as well as financial subsidies. In addition, NGOs and donors have mainly invested in the poor sector, while the private sector has provided credit for commercial farms in many areas including peri-urban areas. Of the various programmes, two of them will be looked at and these have achieved marked success in UPA.

The Arable Lands Development Programme (ALDEP)

The ALDEP was conceived in 1977 and has gone through several phases since

then. It provide assistance to needy farmers who are capable of increasing production and household income, the prerequisites for eligibility being their number of cattle and their yearly income. The assistance packages provided the approved applicants with an 85-90% subsidy for fencing materials, water tanks, agricultural tools and inputs. These condition as are attractive enough to attract a great number of citizens to be farmers, but only with minimal involvement. Unfortunately ALDEP has not been able to significantly improve the performance of urban and peri-urban farmers as they usually cultivate only small patches of land.

The Financial Assistance Programme (FAP) 1982-2001.
The FAP was introduced in 1982 as an incentive and subsidy policy aimed at creating employment and encouraging investment in a range of economic activities, including agriculture. The FAP has been a significant catalyst to the increase in urban agriculture. Funding has been given to set up farms for various agricultural activities, to purchase inputs and help pay for training and other costs.

Conclusion
It can not be denied that UPA is diverse, omnipresent, thriving and a profitable activity. Several benefits can be accrued from the practice and it's of great significant to the urban poor. It is still evident that there are difficulties in accessing resources like land, water and financial resources. There is need to develop policies that can ensure availability and access to resources. This can only succeed if done in an integrated and sustainable manner. This therefore entails the need to involve all stakeholders, be they public and private authorities, NGOs and the donor community as well as the farmers themselves. Sector ministries should also try to come up with policies that can make available resources like land, water and finances in the right quantity, right quality, right time and to the right people. This has to be done in an integrated and sustainable manner.

References

1. Adamo, Abra. 1999. **Wealth in people: Social Networks and Access to Resources Among Female Market Gardeners in Kakasunanka, Ghana.** Unpublished M.A. thesis, Carleton University, Ottawa, Canada.

2. Berry, Sara. 1989. "**Social institutions and access to resources."** Africa 59(1), 41-51.

3. Chaipa, I. (2001). "The Urban Planning Dilemma in Harare, Zimbabwe" Urban Agriculture Magazine no 4, July, 17-18.

4. Drescher, A.W. Urban and Peri-Urban Agriculture on the Policy Agenda: Report of the E-conference" **Urban Agriculture Magazine no4 July, 7-8**

5. Dubbeling, Marielle. 2001 "**Access to land for UA"** SGUA Communication 2001/10/25.

6. Freeman, Donald B.1991. **A City of Farmers: Informal Urban Agriculture in the Open Spaces of Nairobi, Kenya.** Montreal and Kingston: McGill-Queen's University Press.

7. Kitilla, Martin D. and Anasteria Mlambo 2001. "Integration of Agriculture in City Development in Dar es Salaam". **Urban Agriculture Magazine** no4, July 22-24.

8. Mabogunje, Akin L. 1992. "Perspectives on Urban and Urban Management Policies in Sub-Saharan Africa." **World Bank Technical Paper 196: Africa Technical Department Series.** Washington: The World Bank.

9. Martin, A., Oudwater, N. and Meadows, K. (2000) Urban Agriculture and the Livelihoods of the Poor in Southern Africa: Case Studies from Cape Town and Pretoria, South Africa and Harare, Zimbabwe, Presented at the International Symposium – 'Urban Agriculture and Horticulture – The Linkage with Urban Planning, Berlin 7-9 July 2000**.**

10. Mbiba, B. (1994) "Institutional responses to uncontrolled urban cultivation in Harare: Prohibitive or accommodative?" **Journal of Environmental and Urbanisation** 6(1)

11. Mbiba, B. (1995**) Urban Agriculture in Zimbabwe: Implication for Urban Management and Poverty**. Avebury, Ashgate Publishing, London.

12. Mbiba Beacon and Rene' Van Veenhuizen. 2001. "Editorial: The Integration of Urban and Peri-Urban Agriculture into Planning" in **Urban Agriculture Magazine no4, JULY 2001, 1-5.**

13**.** Mougeot, Luc J.A. 2000 "Urban agriculture: definition, presence, potentials and risks" in Nico Bakker,Marielle Dubbeling,Sadine Gundel, Urlich Sabel-Koschella, Henk de Zeeuw (eds.) **Growing Cities, Growing Food. Urban Agriculture on the Policy Agenda.** Feldafing: Deutsche Stiftung fur International Entwicklung (DSE), 1-42.

14. **Mudimu, G. (1996) 'Urban Agriculture Activities and Women's Strategies in Sustaining Family Livelihoods in Harare, Zimbabwe,** Singapore Journal of Tropical Geography: **17 (2): 179-194.**

15. **Mudimu G.D, Siziba S., Hanyani-Mlambo B., (1998), 'Urban Agriculture, Food Security and the Environment:** Socio-economics, Land Use Conflicts and Cultivators' Views

16. Mudimu G.D. 2001 "Urban Agriculture in Harare: New Gender and Socio-economic Dimensions", Paper presented at the Regional Stakeholder/Experts Meeting on Urban Agriculture in Southern Africa, 15-19 March 2001 University of Stellenbosch, Cape Town, South Africa.

17. Municipal Development Programme (MDP) Regional Office for Eastern and Southern Africa (in association with International Development Research Centre) 2001. **The Political Economy of Urban and Peri-Urban Agriculture in Eastern and Southern Africa Proceedings of the MDP/IDRC Workshop.** Bronte Hotel, Harare, Zimbabwe, 28 Feb.-2 march 2001.

18. Njambi, A. K.2001. "The Political Economy of Urban Agriculture in Eastern and Southern Africa: The case of Kenya" in **The Political Economy of Urban and Peri-Urban Agriculture in Eastern and Southern Africa; Proceedings of the MDP/IDRC workshop.** Bronte Hotel, Harare, Zimbabwe, 28 Feb.-2 March 2001, 41-49

19. Novo, Mario Gonzalez and Cathrine Murphy. 2000. " Urban agriculture in the city of Havana: a popular response to crisis" in Nico Bakker, Marielle Dubbeling, Sadine Gundel, Urlich Sabel-Koschella, Henk de Zeeuw (eds).**Growing Cities Growing Food .Urban Agriculture on the policy Agenda.** Feldafing: Deutsche Stiftung fur Internationale Entwicklung, 9DSE, 329-348

20. Obosu- Mensah, H.W.O. 1999. **Food Production in Urban Areas: A Study of Urban Agriculture in Accra, Ghana.** Aldershot: Ashgate Publishing Ltd.

21. Okoth-Ogenda, H.W.O 1989. "Some issues of Theory in the study of Tenure Relations in African Agriculture" **Africa 59** (4). 321-334

22. **Olima, W.H.A (2001) Land Use Changes in Peri-Urban Nairobi, Kenya, Unpublished Report.**

23. Rakodi, Carole. 1988."Urban Agriculture: Research Questions and Zambian evidence." **The journal of Modern African Studies** 26 (3) 495-515.

24. RUAF 2001. **Urban Agriculture Magazine No4** July. (The Integration of Urban and Peri-urban Agriculture into Planning)

25. Smith, David. 2000 "Urban Agriculture in Harare: Socio-economic Dimensions of a Survival Strategy" in David Grossman, Leo van den Berg, and Hyaacinth I Ajaegbu (eds.)**Urban and Peri-urban Agriculture in Africa. Proceedings of a workshop in Netanya, Israel, 23-27 June 1996.** Aldershot: Ashgate Publishing Ltd, 9-40.

26. World Bank 2000. **World Development Report 2000/2001: Attacking Poverty.** The World Bank, Oxford University Press. New York.

27. World Bank (2000, 2001), **World Bank Poverty Report**, the World Bank, Oxford University Press, New York.

Annex 9: Support Services [Policy, Legislation, Institutional Support and Advisory Services] for Urban and Agriculture– By Godfrey Mudimu and Shingirayi Mushamba

Introduction

Urban and peri-urban agriculture, incorporating production and livestock keeping, has become part of the food security system in the urban areas of most countries in Eastern and Southern Africa. In addition, urban agriculture is now an established strategy for sustaining livelihoods of urban populations. It directly provides food and indirectly generates household cash income through saving on food expenditure, employment and selling of surplus production. Urban agriculture expanded massively in the last twenty years in response to changes in the micro-economic environment characterized by poor economic performance resulting in increase in poverty levels in the urban areas. Until the mid-1990's, few local authorities and central governments recognized urban agriculture as a legitimate land use.

With increasing poverty in the urban areas, city planners and national policy makers now recognize the central role of urban and peri-urban agriculture in the wider urban economy. It is now generally recognized urban and peri-urban agriculture apart from contributing to household food security; it has a wide role in sustaining urban population in terms of poverty alleviation and contribution to the urban economic activities through processing and marketing of the produce. Most governments and local authorities now support urban agriculture and are seeking ways with which to facilitate sustainable, safe and profitable production. Urban agriculture has been incorporated into urban expansion plans for Dar-es-Salaam, Dodoma in Tanzania, Maputo in Mozambique (Mougeot, 2000). Active programmes exist in most cities in South Africa. In Zimbabwe, several cities and municipalities now have an accommodating approach to urban agriculture. The Ministry of Local Government and National Housing has pledged more land from acquired surrounding farms to local urban authorities for urban agriculture.

The expansion of urban agriculture is a worldwide phenomenon that has caught the attention of policy makers, activists and funding agencies as a new response to issues of food security, economic development, poverty alleviation, urban blight, waste recycling and environmental preservation. While this is the case, it is apparent that formal support for urban and urban agriculture is still to be developed in Eastern and Southern Africa. Policy, legislation, institutional support and advisory services are yet to be designed in the majority of the urban areas and countries. These recent developments and acceptance of urban agriculture presents challenges for planning and managing the urban space for urban agriculture.

The theme of this paper is to discuss issues that relate to formalized support for urban and urban agriculture in Eastern and Southern Africa. The terms of reference are to:

1. Review the nature of support for urban agricultural activities in the Eastern and Southern Africa.
2. Review what agricultural support services and facilities (farm inputs, equipment, finance, advisory, information, markets, and agro-business services, etc.) are accessible to urban agricultural producers,
3. Based on the above, identify if and how existing facilities can be harnessed or improved to increase access to the services to the urban agricultural producers providing recommendations on how to mobilize resources from the private sector.
4. Identify programmatic strategies that can be developed to improve access to support services.

The paper dwells on socio-economic, institutional and policy aspects that need to be considered in coming up with support systems for the integration of urban agriculture into land use planning for city development. This is critical if urban and urban agriculture is to be sustainable in harmony with other competing or alternative use of urban land space.

The paper assumes that urban agriculture is now an accepted land use form in the region. This has arisen for the change in attitude by both residents and authorities responsible for administration of cities. The change in attitude has been forced by circumstances that have driven the growth in urban agriculture. On this basis, the paper outlines the outstanding issues and gaps in information and knowledge that need to be addressed by policy in designing legislation and institutional support.

The paper uses arguments raised in the other thematic papers[1] on the benefits and costs of urban agriculture, constraints to access to resources (both land and financial resources). Strategies for the way forward are proposed. Some of the strategies are borrowed from what has been done in the region and elsewhere so that there is no re-invention of the wheel.

The paper is based on desk study of literature (both published and grey literature) on urban agriculture in Eastern and Southern Africa as well as outside the region. A case study of Cuba is presented briefly to highlight the revolution in urban agriculture and the nature of support services. The second section outlines the

[1] (a) Thematic Paper 1. The positive impacts of urban agriculture, integration into urban development and prospects for growth in Eastern and Southern Africa
(b) Thematic Paper 2: Strategies in Addressing the Environmental Challenges associated with Urban and Peri-urban Agriculture.
(c) Thematic Paper 3. Land, water and other resources for sustainable urban and peri-urban agriculture in eastern and southern Africa

background to urban agriculture and characterizes production systems, outputs, inputs uses, and the beneficiaries. The third section describes the support services available. Section four reviews issues to be considered in policy development. The fifth section proposes actions that need to be adopted.

Support Services for Urban Agriculture in Cuba, A Case Study.

It is imperative to provide a case study of urban agriculture and support services in Cuba, to enable a deeper understanding of the subject. In 1989, after the collapse of the Union of the Soviet Socialist Republic, Cuba went through a serious economic crisis. Cuba had been dependent for a long-time on the USSR for food imports and economic aid. During the peak of the economic and food crisis that ensued the Government of Cuba assigned resources and financing for the building of high yield urban gardens.

Local governments authorized the people to use, free of charge, state owned vacant plots of land in and around cities. Working commissions with representatives from several institutions and from the media were created to provide support for the initiative.

City governments went further and requested the Ministry of Agriculture to use existing structures to provide technical support for training and motivating citizens in the agricultural management of urban farming activities. Arrangements were also made for the sale of botanical and agamic seeds, as well as common tools such as watering cans to the urban population with the help of several institutions.

Government and municipal support for urban agriculture was accompanied early on by the support of local grassroots organizations. Members of civic bodies acted as direct promoters of the process by replicating it in other urban centres of the country outside Havana.

On the international front, urban agriculture became a focus area for external assistance, as its role in addressing the food crisis was recognized. Foreign sources of funding for the development and enhancing of urban agriculture through government and non-governmental organizations were opened up. Financing was initially opened up for community gardens through farmers groups and was used to acquire basic inputs such as tools, irrigation equipment, well-drilling equipment, windmills and seeds, as well as for the development and improvement in training programmes for technicians and urban farmers.

Recently, new projects have been started on leading –edge technologies, such as greenhouses for the production of seedlings and for intensively grown fresh

vegetables. These projects have led to higher volumes of production and are sources of employment.

Today, Cuba has become the centre for urban agriculture in the world. There are many people that visit Cuba, from the academic and agricultural institutions to become acquainted with Cuba's experiences in urban agriculture. In ten years, Cuba achieved a revolution in urban agriculture, able to meet some of its urban food needs. The number of jobs generated by urban agriculture activities is estimated at 100 000. Most of these people are employed in high-yield urban gardens, community gardens, intensive – cultivation gardens, seedling greenhouses, agricultural support stores and other associated supporting and monitoring services.

Urban agriculture has demonstrated in practice, in less than ten years, that in the small and diverse plots of land, a considerable volume of food can be produced using local resources and applying the most appropriate techniques.

The results and impacts of the development of urban agriculture in Cuba involved a high level of education for technicians, officials and producers, which in turn contributed to the dissemination of knowledge and information, as well as to capacity building.

Support Services for Urban Agriculture in Eastern and Southern Africa

Studies in the region (Mlozi, et al, 1992; Drescher, 1996; Mbiba, 1995; Mudimu, 1996, Nuwagaba and Atukunda, 2001) show that urban and peri-urban agriculture contributes greatly to the food security of many urban residents. It enhances considerably the degree of self-sufficiency in cereal, fresh vegetable and small livestock production. Self-produced food provides nutritious food otherwise unaffordable, replaces purchased staples or supplements these with more nutritious foodstuff, affords savings that can be spent on non-produced foodstuff or other needs and generates principal income that can be reinvested in other urban businesses (Mougeot, 2000). Urban and peri-urban agriculture also provides employment to a large number of urban residents. In Nairobi, for example, 25% of the population is employed in urban and peri-urban agricultural activities (Nugent, 2000).

A study by Drescher (1994) revealed that close to 40 percent of households in Lusaka, Zambia, relied on the urban environment to gather, or grow, food for home consumption and sale. Lee-Smith (1991) reported that a 1985 study in Nairobi, Kenya, showed that 29 percent of Nairobi households grew crops and 17 percent raised livestock with a total value of US$17 million. In 1991, Mbiba assessed urban agriculture comprising of dairy cows, maize, sheep and pigs in Maseru, Lesotho, at close to US$13 million (Mbiba, 1995). In Zimbabwe, it has been shown that maize

production is dominant and supplies households with up to three months of their stable diet.

Production Systems, Input Use and Outputs

Urban and peri-urban agriculture varies from city to city and country to country. The two main forms are intra-urban (on-plot or off-plot) and peri-urban (fringe). Off-plot cultivation and livestock grazing take place along railway lines, open areas, on the periphery of parks, undeveloped public and private land, properties of schools and churches and urban fringe. Table 1 summarizes the variety of farming systems in urban areas.

Urban farmers range from a household garden in 20 m^2 or less, to a small-scale farmer making a living on 200 m^2, to a large-scale operator who may use up to10 hectares in an industrial zone (UNDP 1996).

Table 1. Range of Farming Systems in Urban Areas

Farming systems	Product	Location or technique
Aquaculture	Fish and seafood, vegetables, and fodder	Ponds, streams, estuaries, sewage, wetlands
Horticulture	Vegetables, fruit, herbs, beverages, compost	Home sites, parks, rights-of-way, containers, rooftops, hydroponics, wetlands, greenhouses, shallow bed techniques, layered horticulture
Floriculture	Flowers, house plants	Ornamental horticulture, rooftops, containers, greenhouses, rights-of-way
Animal Husbandry	Milk, eggs, meat, manure, hides, and fur	Zero-grazing, rights-of-way, hillsides, cooperatives, pens, open spaces
Agroforestry	Fuel, fruits and nuts, compost, building material	Street trees, home sites, steep slopes, green belts, wetlands, orchards, forest parks, hedgerows
Mycoculture	Mushrooms, compost	Sheds,
Vermaculture	Compost, worms for fish feed	Sheds, trays, wetlands
Sericulture	Silk	Home sites, trays
Apiculture	Honey, pollination, wax	Beehives, rights-of-way, home sites
Landscape gardening, arboriculture	Grounds design and upkeep, ornamentation, lawns, gardens	Yards, parks, play fields, commercial frontage, road sides, lawn and garden equipment
Beverage crops cultivation	Grapes (wine), hibiscus, palm tea, coffee, sugar cane, herbed tea, banana (beer)	Steep slopes, beverage processing

Sources: UNDP 1996; Rowntree 1987.

There is not much of protected environments and hydroponics in the majority of countries in Eastern and Southern except South Africa and to some extent Kenya.

A review of existing bibliography on UA experiences in the region shows that most production system in is the family vegetable gardens. The main produce grown is vegetables (tomatoes, squash, beans, lettuce, onions, etc.); The second fairly well developed activity is the breeding/raising of small livestock (pigs, chickens, hens, rabbits, etc.), which are fed with the vegetal production residues. Family units mainly carry out this activity.

Urban agriculture usually engages shorter-cycle, higher-value market crops and uses multi-cropping and integrated farming techniques located where space and water are scarce. It uses both vertical and horizontal space to its best advantage. Most of the production is intensive using simple technologies. Urban agriculture uses, reuses natural resources, and urban wastes to produce crops and livestock. The principal feature of urban farming is the reuse of waste. The processes are typical of agriculture with similar inputs and steps, but the design is to use both human and animal wastes as fertilizer and water sources for growing vegetation. In this near idealized model, external inputs still exist, however, such as pesticides (UNDP 1996).

There is few data on which to base a sound judgement about input use, costs, manpower requirements, output and the importance of urban food production with respect to the diet and income of the family. This is because past research, which focused on specific towns and cities, did not use a common methodological approach that would allow aggregation and comparative analysis.

On-plot production for self-consumption requires few resources at the individual family level. A hundred square metres intensively cultivated can supply the vegetables needed for a family of five persons. The labour required to maintain an urban garden ranges from 1 to 1.5 working days per week. Costs are low because one can use materials that are already available to households, even garbage.

Post Production and Marketing Activities

Agriculture conducted in urban areas exists largely for the daily needs of consumers within cities and towns. Outputs are oriented to urban markets rather than national. Generally, the observations are that households consume up to 90 percent of their production (Rogerson, 1993; Mbiba, 1994, 2000, Mudimu, et al 1996, Nuwagaba and Atukunda, 2001). The balance is marketed for cash or exchanged through social obligations. Most family vegetable gardens are for self-consumption. Although output is not large, it affords diversification and a supplement to the basic diet.

Peri-urban agriculture generally is the major source of most fresh vegetables consumed in cities. Most is practised on intensive commercial basis with high levels of inputs use and under irrigation. In the case of Kampala in Uganda, Nairobi in Kenya, to some extent Harare in Zimbabwe, and several cities in South Africa, peri-

urban agriculture is highly integrated with production of high value export horticultural crops.

Participants and Beneficiaries

In all countries within the region, the practice of urban agriculture increased markedly during the post-1991 years due to the economic hardships brought about by the economic structural adjustment programme initiated in 1990. This included cost recovery measures in health and education, removal of subsidies on food commodities and retrenchments in the formal employment sectors. These have in turn contributed to falling real incomes and reduced food security status of urban households. These hardships resulted in vulnerable households turning to urban cultivation as an alternative source of food, to save on food expenditure and raise cash income. Urban cultivation had become an important strategy through which families sought to cope with the impact of the economic structure adjustment and sustain their livelihood.

Most studies show that the main beneficiaries of urban agriculture are low-income families living in suburban or marginal city areas. The majority of the practitioners do not have permanent employment. Women are the main workers. Those involved tend to be resident in the old urban settlements, as opposed to recent migrants from rural areas.

Urban farmers and gardeners come from a wide range of economic levels, ethnic backgrounds and relationships to the market. While in the 1970s, urban agriculture was a survival strategy for the poor, this changed in the 1980s and 1990s. A significant proportion of the medium income earners are now actively participating in urban agriculture (Nuwagaba and Atukunda, 2001; Mudimu, 1996). Until recently, the majority of participants had been women. In nearly all the countries, men are now participating in urban agriculture activities for direct production of food and as source of wage income from employment. This is attributed to stagnant economic growth resulting in reduced employment prospects for men. Thus urban agriculture has become one of the self-reliance strategies adopted by the urban population to mitigate against adverse macro-economic conditions by a cross section of the urban socio-economic groups.

Agricultural Support Service Provision

Urban agriculture needs to be supported with services like extension, inputs, research, credit, and market information among others. Good information and technical support is very important to strengthen the chance of obtaining food crops to meet the needs of a family. Lack of technical knows, poor production techniques, improper use and lack of training in proper application of agro chemicals contributes to low output and to some extent on the environmental degradation. Urban

producers need to be taught efficient and safe production methods and in some case new technologies for intensive land use, such as hydroponics. In addition, farmers need information on affordable crop and animal varieties appropriate for intensive production in the urban environments are needed.

Various studies show that there are few cities with urban agriculture extension services by government, private and non-governmental organizations, supporting urban on-plot and off-plot agriculture. Most vegetable gardens worked by low-income beneficiaries do not benefit from adequate technical guidance or orientation. This is a legacy from the past when urban agriculture was not formally recognized. The situation for peri-urban farmers with more resources and knowledge is somewhat different. They have more resources; they work with improved seeds, drip irrigation, use fertilizers and pesticides, and have lands that are more suitable.

Where public extension programmes have been established, it has been shown that the agricultural extension workers do not have skills for working with urban farmers as they were trained for rural farming areas where the environment and technological requirements are different from urban areas, hence poor extension support for urban agriculture.

Because there are no established programmes for providing support services to urban producers, the producers are left to use their own knowledge on technical issues. In the majority of the cities, the producers rely on knowledge from their rural agricultural background. This in most cases is in adequate as the environments are usually different and technologies may have changes with time.

The producers purchase inputs (fertilisers, seeds, pesticides, herbicides), from accessible retail shops. These shops, who stock the inputs based on demand by local resident, do not have technical backup from the manufacturers. Thus, the retailers are not reliable sources of technical information and advice. Consequently, the producers buy and apply inappropriate inputs such as seed varieties, fertilizers and chemicals. Also due to high cost of seeds, fertilizers and pesticides, many urban producers are using none or less of these in their production. Furthermore, they may buy and the least expensive inputs which may be inappropriate.

High water rates and general water unavailability in most of the cities in Eastern and Southern Africa are making urban agriculture, especially on-plot gardening uneconomic. Mudimu (2001) observed that in some urban areas of Harare, on-plot gardening has stopped dues to high water costs. Seasonal water shortages, especially in the dry season when the water table is lowest, as well as general non-availability of irrigation water limit production in both urban and peri-urban areas. This creates production gaps that exacerbate deficits in produce supply of the problem of seasonality. There has been some but limited research and development of efficient

water use techniques for urban agriculture, such as systems for utilizing wastewater and use of hydroponics.

These trends contribute greatly to concerns the future of urban and peri-urban agriculture. Given that demand for urban agriculture land exceeds the supply, there is need to come up with strategies for making suitable land available. One possible solution is designation and or the conversion of unused parcels of farmland around urban environment for agriculture purposes. This requires identification of public/unused land that might be available for local food production.

Health and Environmental Risks

City authorities remain reluctant to accept urban agriculture because of perceived negative effects on the health and environmental conditions of an urban population. The health risks, that are unique or intensified by urban conditions, include the following (Flynn, 1999 in deZeeuw and Lock, 2000):

i. Use of polluted water and soils (by industry, traffic and other waste disposal methods) which may lead to contamination of produce.
ii. Unsafe production methods, such as the tendency to over-apply nitrogenous fertilizers that would result in excessive nitrates in water arising from excessive leaching, inappropriate pesticides, and unsafe application methods that would contaminate urban water supplies and the produce.
iii. Communicable diseases associated with urban agriculture may arise from reuse of (untreated or poorly treated) waste and wastewater in agriculture on wrong crops, using improper irrigation techniques and without taking appropriate precautions; and poor management of livestock in densely populated areas

Urban authorities also view urban agricultural practices as increased costs of urban environment management. The negative impacts and costs associated with urban agriculture are identified as:

(a) Soil erosion which eventually results in silting water ways and sources;

(b) Use of open areas which should be used for recreation by residents,

(c) Costs of re-surveying or re-pegging areas because the boundary pegs were removed by cultivators

Some residents, particularly in wealth suburban areas in South Africa and Zimbabwe, are not supportive of urban agriculture on a large-scale. They view urban agriculture as having negative environmental impacts on a significant proportion of cities' land contributing to some decline in the aesthetic quality of urban space and on the quality of urban life. These residents have some influence on city policy formulation.

Co-ordination and Networking of Participants and Services Providers

Improved and sustainable production requires the cooperation and involvement of university researchers, NGOs, private input supply companies, international organizations, municipalities, government agencies for extension and research is required in the training and technical advice of urban agricultural producers. It is generally observed that currently there is little inter-organizational coordination and networking among the participants in urban agriculture and organizations that support and provide services. This limits the effectiveness of any effort and does not allow taking advantage of economies of scale in service provision and sharing of strategies and experience in support of urban agriculture.

There is limited publication of experiences on urban work and little linkages and coordination between these works within urban areas in one country. Whatever is done is limited to the particular urban area without the experience being extrapolated beyond. This limits sharing of information on best practices.

Approaches that have been found to be effective in agricultural development projects in rural areas are not adapted for urban agriculture. Appropriate low cost alternative inputs and production practices should be investigated.

Growing Shortage of Suitable Land and Colonization of Peri-urban agricultural land

General all cities in Eastern and Southern Africa are facing a growing shortage of land suitable for agriculture in urban and peri-urban areas. This is due to expansion in industrial development and housing schemes due to the need to accommodate increasing urban populations. As land is the principal and critical resource for urban and peri-urban agriculture availability of land, access to land and usability of land, are of particular concern to urban agriculture and its role in contributing to food security to low income farmers (Soonya, 1999). Throughout the cities, vacant land tends to be viewed as land that should eventually be developed for industry, commercial uses or housing to increase the tax base and contribute to growth. When land is given over to urban agriculture, it is viewed as temporary until a more profitable use comes along. Urban agriculture is viewed as in competition with potential uses for the land.

Small and temporarily usable urban land for off-plot agriculture limits the scale of production. Given shortage of and competing uses, urban land use planning and management are unlikely to prioritise urban and peri-urban agriculture as a legitimate or priority land use. For urban residents with insecure access to land, it is risky for them to invest time and resources in agriculture.

In all countries access and use, rights to land for urban agriculture are complex, and dynamic. Land markets and sub-markets are a mix of formal and informal transactions, some of which are not well understood. In many urban areas in Eastern

Africa, rapid changes in land titles, or the official or illegal privatisation of land, are adversely affect access by marginalised groups for urban and peri-urban agriculture (Martin et al, 2000; Olima, 2001). As a result, it is often unclear who has rights to the land, how these rights are acquired and ensured, who benefits and who loses in terms of access to the land and its products. These may have negative effects the practice of urban and peri-urban agriculture for some sections of the urban population in the affected countries.

Peri-urban commercial agriculture generally has been the source of most fresh food consumed in cities. This pattern is, however, changing due to urban development and expansions. As cities grow, they are occupying peri-urban rural areas this is pushing most peri-urban producers further away from the cities and from new and highly productive farming areas. This would create marketing problems especially for farmers and hawkers, as the added distance to the markets would increase their transport costs and perhaps the damage to their perishable products.

The high demand for housing, either through formal and informal settlements, is pushing the rental charges for agriculture in peri-urban areas to uneconomic levels. This trend will negatively affect urban and peri-urban production.

In the new suburban low density housing developments which continue to be built on the edges of cities, often on prime agricultural land, there are no policies to encourage developers to set aside land for urban agriculture or for future community gardens, although there are requirements for public parks. Measures to incorporate urban agriculture would include ownership of garden sites by parks departments (thereby protecting them as parks), including community gardens in comprehensive plans, and drafting zoning ordinances to protect community gardens as open space.

Legal and Institutional Arrangements for Managing Urban Agriculture

In the majority of cases, there are no legal frameworks for regulating, managing and controlling access to land for urban agriculture. Currently, there are several ways in which the urban poor gain access to land for (peri) urban agriculture. Both formal and informal means have been used to gain access to land. The majority of urban farmers have used informal means to gain access to land, (Mudimu, Siziba and Hanyani-Mlambo 1998).

There is no general policy providing an institutional framework governing the practice of (peri) urban agriculture in Eastern and Southern Africa (Drakakis-Smith, 1995; Martin, et al, 2000; Olima, 2001). As a result there is institutional inertia and lack of policy cohesion in the management of the urban landscape for urban agriculture., for example, For example, Martin et al (2000) observed that, in Zimbabwe, there is

coordinated or commonly shared view on (peri) urban agriculture among the different departments and sections in local authorities and the Ministry of Local Government and National Housing. There is political will to accommodate urban agriculture but there is there not much common ground between the planners and policy. Planners often feel that policy makers prioritize their political ambitions without anticipating their own responsibilities to advise policy makers on alternative land uses.

In Kenya, lack of comprehensive machinery to deal with problems on the peri-urban fringe has created a waste of needed land. Developers in their quest to maximize profit have constantly violated and contravened land regulatory measures such as minimum plot sizes, plot layouts, building designs and development densities. All this has been attributed to lack of a legal or policy framework to enable the government to have some relative control over land already taken up by the urban uses in the peri-urban fringe (Olima, 2001).
Conflicts on urban land-use exist among urban residents. Some residents feel urban authorities are bending too much to political consideration without taking a long-term view of urban development needs. Some and the majority of the resident consider urban agriculture as a right for food security and saving on expenditure.

Way Forward for Urban and Peri-urban Agriculture in Eastern and Southern Africa: Policy Direction

There is general concern for the increase in poverty and the deterioration in the quality of life in urban areas of Eastern and Southern Africa. Poor economic growth has been unable to satisfy, on a significant scale, the basic needs of the urban population, thus requiring that cities establish specific policies and programmes for reducing poverty. Urban and peri-urban food production is therefore a key strategy for food self-reliance, employment creation, and cash for the cities. The sector needs to be supported with services like extension, inputs, research and credit among others. There is need to prepare a long-term dynamic and integrated development plan and investment strategy for urban agriculture. The ultimate goal is to plan, foster and manage sustainable urban agricultural development to effectively meet the needs of its ever increasing urban population gradually improving their living and working environment.

A successful policy approach to advance the integration of urban and peri-urban agriculture with city management requires the following action to be considered:
1. National governments must develop a national policy that will provide a legal framework for urban agriculture activities.
2. Set in place and institutionalise mechanisms for effective co-ordination of urban and peri-urban agricultural activities and with direct stakeholder participation in planning and implementation.

3. Define and set a leading stakeholder (institution) for co-ordination, and get agreement from all stakeholders about the mandate.
4. Define environmental and health standards for urban and peri-urban agricultural activities - defining minimum quality standards for agricultural soils and irrigation water, and health standards tailored to the ultimate consumers. Develop systems and strategies to mitigate effectively the health risks associated with urban agriculture, like: - communicable diseases associated with urban agriculture (e.g. malaria)
   - health risks associated with the reuse of (untreated or poorly treated) waste and waste water in agriculture
   - health risks related with keeping livestock in densely populated areas
   - health risks related with the agricultural use of water and soils that have been contaminated by industry and urban traffic (e.g. heavy metals)
   - health risks related with the intensive use of agrochemicals
5. Regulate access to land and water as well as urban organic wastes and wastewater.
6. Institutionalise administrative procedures (with focus on the community level) to get access to the above-mentioned resources.
7. Institutionalise procedures to monitor the positive and negative effects of urban and peri-urban agricultural activities with regard to social, economic and environmental conditions, and define responsible bodies.
8. Establish procedures to oversee law enforcement on issues regarding urban and peri-urban agriculture.
9. Establish and support urban extension structure and programmes on technical aspects of urban agriculture. This would include short training courses, centres for technical advice and demonstration centres for good practices.
10. Support research and development of appropriate production technologies for urban horticulture, including possibilities of using wastewater for irrigation. This could involve the establishment of a Centre to promote research, education, extension and outreach on the various social, environmental, economic and ecological dimensions of urban farming and sustainable food systems.
11. Encourage and support NGO and private sector to support urban agriculture in service provision (credit).
12. Organize awareness seminars for urban authorities, town planners and all stakeholders (residents included) on urban horticulture and the legal implication.
13. Foster public-private partnerships between companies, city councils, state enterprises and urban and peri-urban agriculture.
14. Urban planners should identify appropriate zones for farming activities, encouraging the infrastructure developments needed by farmers, and implementing protective measures to provide land security.
15. Develop long-range plans (10, 20 or 50 years) forecasting or projecting future urban populations land requirements for agriculture. These plans should be consistent with UN-Habitat Sustainable City Development. In this regard, the

assistance should be sort from the relevant international organizations such as UN-Habitat.

References

Bowyer-Bower, T.A.S. and G. Tengbeh (1995) "The environmental implication of illegal urban agriculture in Harare, Zimbabwe". Working Paper No. 4 of ODA Research Project R5946 presented at the Workshop on Urban Agriculture in Harare, University of Zimbabwe, August 30-31 1995.

Chivinge, O. and L. Machakaire, 2001 "Developments in Urban Agriculture in Harare" Paper presented at the Regional Stakeholder/Experts Meeting on Urban Agriculture in Southern Africa, 15-19 March 2001 University of Stellenbosch, Cape Town South Africa.

Demery, L. 1999. "Poverty Dynamics in Africa: An Update" World Bank, Africa Region, Poverty Reduction and Social Development Unit. Washington DC.

Drakkis-Smith, D. (1995) "Socio-economic aspects of urban agriculture in Harare: A preliminary report of field research in 1994/95." Paper presented at the Workshop on Urban Agriculture, University of Zimbabwe, 30-31 August, 1995.

Drescher, A.W. (1994) "Urban agriculture in seasonal tropics of central Southern Africa - A case study of Lusaka, Zambia." Paper presented at the International Policy Workshop on Urban agriculture: A Growing Development Tool, University College London (NRI/CPU), 29 June 1994.

Maria Caridad Cruz and Roberto Sanchez Medina [2003] **Urban Agriculture in the City, A Key To Sustainability in Havana, Cuba**. Ian Randle Publishers, Jamaica and International Development Research Centre, Canada.

Mbiba, B. (1994) "Institutional responses to uncontrolled urban cultivation in Harare: Prohibitive or accommodative?" **Journal of Environmental and Urbanisation** 6(1)

Mbiba, B. (1995***) Urban Agriculture in Zimbabwe: Implication for urban management and poverty***. Avebury, Ashgate Publishing, London.

Mbiba. B. 2000. Urban Agriculture in Harare: Between Suspicion and Repression. In: Growing Cities, Growing Food. Urban Agriculture on the Policy Agenda. A Reader on urban Agriculture. (Eds. Bakker, N., Dubbeling, M., Gödel, S., Sabel-Koschella, U and de Zeeuw, H.). Deutsche Stiftung fur Internationale Entwicklung. Germany. Pp.285-302.

Mudimu. G.D. 1996. "Urban Agricultural Activities in Harare, Zimbabwe: Women's Struggle for Sustaining Family Livelihood." **Singapore Journal of Tropical Geography** December 1996.

Mudimu G.D. 2001 "Urban Agriculture in Harare: New Gender and Socio-economic Dimensions" Paper presented at the Regional Stakeholder/Experts Meeting on Urban Agriculture in Southern Africa, 15-19 March 2001 University of Stellenbosch, Cape Town South Africa.

Rogerson, C.M. (1992) "Feeding Africa's cities: The role and potential for urban agriculture", **Africa Insight**, 22 (4)

Rogerson, C.M. (1993) "Urban agriculture in Southern Africa: Policy issues from international experience." **Development Southern Africa** 10(1)

World Bank 2000. **World Development Report 2000/2001: Attacking Poverty.** The World Bank, Oxford University Press. New York.

MINISTERS' CONFERENCE ON URBAN-PERI-URBAN AGRICULTURE, URBAN FOOD SECURITY AND PROSPECTS FOR GROWTH

28-29 AUGUST 2003

HARARE SHERATON, ZIMBABWE

Participants List

#	COUNTRY	NAME/LAST-	DESIGNATION	ORGANISATION	ADDRESS
1.	**KENYA**	Maina Francisca	Coordinator	Kenya Local Government Reform Programme-Ministry of Local Government	Box 3004, Nairobi, Kenya Tel: (254-20-217255) Fax: (254-20-216756) Bus Email: KMRP@karibunet.com H. Email: f-maina@hotmail.com
2.	**KENYA**	Thairu Millicah	Chief Legal Officer	Ministry of Local Government, Kenya	P.O. Box 30004 Nairobi, Kenya Tel: (254-20-225152 Fax: (254-20-217869) Email: mwthairu@yahoo.co.uk
3.	**KENYA**	Lee-Smith Diana	Regional Coordinator	Urban Harvest	CIP P.O. Box 251717 Nairobi, Kenya Tel: (254-20-630743 ext 4242 Fax: (254-20-631499 Email: d.lee-smith@cgiar.org
4.	**MALAWI**	Hon. Midiani	Deputy Minister	Ministry of Local	P.O. Box 30312,

		Henry		Government	Lilongwe 3, Malawi Tel: (265-1-789388) Fax: (265-1-788083) Email: localgovt@globemw.net
5.	MALAWI	Kalombola George Dyson (Cllr)	Chairman	Local Government	Blantyre District Assembly P. Bag 97 Blantyre, Malawi Tel: (265-8859648)
6.	**MALAWI**	Kawiya Robert	Director, Environment, Leisure and Culture	Blantyre City Assembly	Leisure, Culture & Environment P. Bag 67, Blantyre, Malawi Tel: (265-1670211) Fax: (265-1670417) Email: bcaenv@globemw.net
7.	**MALAWI**	Kazembe Martin	Director	Lilongwe City Assembly	Agriculture & Natural Resources P.O. Box 30396, Lilongwe 3, Malawi Tel: (265-01773144)
8.	**MALAWI**	Mgangira Peter	Chairperson	Ministry of Local Government	Lilongwe District Assembly P.O. Box 93, Lilongwe, Malawi Tel: (265-1-756110)
9.	**MALAWI**	Mvula Godwin	Ward Councillor	Ministry of Local Government	Nyzuzu City Assembly P.O. Box 1, Nyzuzu, Malawi Tel: (265-1-332177) Tel: (265-08825561)
10.	**MALAWI**	Sikwese Luckie	Director of	Ministry of Local	Planning & Development

		Kanyamula	Planning & Development	Government	P.O. Box 30312 Lilongwe 3, Malawi Tel: (265-1-789388) Fax: (265-1-788583) Email: sikwese_luckie@hotmail.com
11.	**SWAZILAND**	Hon. Shabangu Albert H.N	Minister	Ministry of Housing and Urban Development	Box 1832, Mbabane Swaziland Tel: (268-4043121) Email: minhouse@realnet.co.sz
12.	**SWAZILAND**	Lukhele Sibongile	Director	Ministry of Housing & Urban Development	Housing & Human Settlements Box 1832, Mbabane, Swaziland Tel: (092 684043134) Fax: (092 684044085) Email: minhouse@realnet.co.sz
13.	**TANZANIA**	Hon. Pinda Mizengo K.P.	Deputy Minister	President's Office Regional Administration & Local Government	P.O. Box 1973, Dodoma, Tanzania
14.	**ZIMBABWE**	Hon. Dr. Ignatius Chombo	Minister	Ministry of Local Government Public Works & National Housing	Local Government Prom & Administration, Bag 7755, Causeway, Harare Tel: 263-4-728201)

15.	**ZIMBABWE**	Hon. Chief Charumbira Fortune Zephania	Deputy Minister	Ministry of Local Government Public Works & National Housing	16 Broadmead Lane Chisipite, Harare, Zimbabwe Tel: (011 808 555) Email: charumbirafz@yaho.com
16.	**ZIMBABWE**	Dr. Vincent Hungwe	Permanent Secretary	Ministry of Local Government Public Works & National Housing	
17.	**ZIMBABWE**	Chatiza Kudzai	Development Consultant	Development Associates	Box 322, Waterfalls, Harare Zimbabwe Te: (011210148) Fax: (265 4 307720) Emails: kudzai@mweb.co.zw
18.	**ZIMBABWE**	Chidavarume Thandiwe	Administration Officer	Ministry of Local Government Public Works & National Housing	Resettlement Makombe Building, Harare, Zimbabwe Tel: (263 4 796757)
19.	**ZIMBABWE**	Nyakujara Tariro	Legal Advisor	Ministry of Local Government Public Works & National Housing	Legal Department Tel: (263-4-704560)
20.	**ZIMBABWE**	Chikuruwo Jacob	Principal Administration Officer	Ministry of Local Government Public Works & National Housing	Local Government Prom & Administration, Bag 7755, Causeway, Harare Tel: (263-4-728201)
21.	**ZIMBABWE**	Chiripanhura Bornway Mwanyara	Principal Administration Officer	Ministry of Foreign Affairs	Protocol, Box 4240, Harare Tel: (263-4-790501) Fax: (263-4-790501)

22.	**ZIMBABWE**	Jones Erica	Deputy Secretary	Ministry of Local Government Public Works & National Housing	Housing & Stateland Management, P. Bag 7706, Causeway, Harare Tel: (263-4-792307) Email: enjoneszw@hotmail.com
23.	**ZIMBABWE**	Katiza Charles	Secretary General	African Union of Local Authorities	86 Selous Ave, Harare Tel: (263-4-795561)
24.	**ZIMBABWE**	Katuka T.	Retired Lt. Colonel	Ministry of Local Government Public Works & National Housing	P. Bag 7706 Causeway, Harare Tel: (263-4-796199) Email: katuka@africaonline
25.	**ZIMBABWE**	Kuwanda Lexton T.	Under Secreatary	Ministry of Local Government Public Works & National Housing	Department of Local Government Promotion & Administration P. Bag 7755, Causeway, Harare Tel: (263-4-708017) Tel: (011201177)
26.	**ZIMBABWE**	Magaya Honesty	Acting Director	Ministry of Local Government Public Works & National Housing	Department of Physical Planning, Box CY 968, Causeway, Harare Tel: (263-4-726605) Fax: (263-4-735662)
27.	**ZIMBABWE**	Magumbe Matthew	Under Secretary	Ministry of Local Government Public Works & National Housing	Department of Local Government Promotion & Administration

					P. Bag 7706, Causeway, Harare Tel: (263-4-737195)
28.	**ZIMBABWE**	Mangena Alexander	P.A.O	Ministry of Local Government Public Works & National Housing	Department of Local Government Promotion & Administration P. Bag 7706, Causeway, Harare Tel: (263-4-728021-9)
29.	**ZIMBABWE**	Nyamakura Rockford Lovemore	Chief Internal Auditor	Ministry of Local Government Public Works & National Housing	Internal Audit P. Bag 7706, Causeway, Harare Tel: (263-4-793304)
30.	**ZIMBABWE**	Mhakayakora Joseph	Principal Director	Ministry of Local Government, Public Works and National Housing	Public Works Department P. Bag 7706 Causeway Tel: 796204 Email: mhakayakora@zol.co.zw
31.	**ZIMBABWE**	Marongwe Nelson	Research Fellow	ZERO	Box 5338, Harare Tel: (091347715)
32.	**ZIMBABWE**	Masawi Constance	Secretary	ZERO	Administration, 158 Fife Avenue, Harare Tel: (263-4-720405)
33.	**ZIMBABWE**	Mawire Barnabas	Community Programme Manager	Environment Africa	Community Programme, Box A639, Avondale, Harare Tel: (263-4-802276)

					Email: bmawire@hotmail.com
34.	**ZIMBABWE**	Mbetu Ramson	Facilitator	SNV Zimbabwe	Tel: (263-4-369041) Email: rammbetu@mweb.co.zw
35.	**ZIMBABWE**	Mkaronda Juliet	Resource Centre Coordinator	SafAIDS	Southern Africa HIV/AIDS Information Dissemination Service, 17 Beveridge Road, Avondale, Harare Tel: (263-4-336195)
36.	**ZIMBABWE**	Mubako Vongai M.	Senior Projects Officer	Ministry of Local Government Public Works & National Housing	Department of Local Government Promotion & Administration P. Bag 7706, Causeway, Harare Tel: (263-4-707017/707645)
37.	**ZIMBABWE**	Muchopa Chiedza	Lecturer	FANRPAN -UZ	Agriculture Economics Box MP 167 Mt. Pleasant Harare Tel: (263-4-303211 ext. 1582) Email: cmuchopa@agric.uz.ac.zw
38.	**ZIMBABWE**	Mudzinge Nyarai P.	Under Secretary	Ministry of Local Government Public Works & National Housing	Department of Local Government Promotion & Administration P. Bag 7706, Causeway, Harare Tel: (263-4-700261)
39.	**ZIMBABWE**	Mupotola Moono	Trade/SPS Specialist	SADC Food Security and Rural Development Hub	12th Floor, Social Security Centre

					Parklane, P. Bag CY270 Harare Tel: (263-4-792368/792348/9) Fax: (263-4-792410/1) Email: mmupotola@sadchub.org
40.	**ZIMBABWE**	Dr. Murombedzi James C.	Regional Director	IUCN-ROSA	Tel: (263-4-728266-7) Fax: (263-4-720738) Email: james.murombedzi@iucnrosa.org.zw
41.	**ZIMBABWE**	Musekiwa Chrispen	Editor/ Public Relations Officer	Urban Councils Association of Zimbabwe	Communication Office P.O. Box 23, Harare Tel: (263-4-721623/706758) Fax: (263-4-252784) Email: ucaz@samara.co.zw
42.	**ZIMBABWE**	Maseva Chrispen	Senior Ecologist	Department of Natural Resources	PO Box CY385, Causeway Harare Tel: 705661 Email: chrismaseva1@yahoo.co.uk
43.	**ZIMBABWE**	Rutivi Catherine	Communications Officer	FANRPAN	Policy Division 12th Floor, SSC Building, Julius Nyerere Way, Harare Tel: (263-4-792348/50) Fax: (263-4-792408/9) Email: crutivi@fanrpan.org

44.	**ZIMBABWE**	Dr. Takavarasha Tobias	Chief Executive Officer	FANRPAN	Policy Division 12th Floor, SSC Building, Julius Nyerere Way, Harare Tel: (263-4-792348/50) Fax: (263-4-792408/9) Email: ttakavarasha@fanrpan.org
45.	**ZIMBABWE**	Manikai Guardiner Isaac	Chairman	Department of Rural and Urrban Planning University of Zimbabwe PO Box MP 167, Mt. Pleasant Harare Tel: 303211 Ext. 1554 Fax: 333407 Email: gimanikai@hotmail.com	
46.	**ZIMBABWE**	Makhuza Zunde	Director	Musikavanhu Project 11005 Budiriro 5A Harare C/O Tel: 795771 ext. 1512	
47.	**ZIMBABWE**	Ndlovu Moffat	Town Clerk	Bulawayo City Council PO Box 591 Bulawayo Tel: (09) 75011 Fax: (09) 69701 Email: byotc@mweb.co.zw	
48.	**ZIMBABWE**	Tanyomana Ruramai John	Commodity Executive	Agric. Economics Zimbabwe Farmers Union PO Box 3755	

				Harare Tel: 306476 Email: zfuhq@africaonline.co.zw	
49.	**ZIMBABWE**	Mwaisupule Japhet		Tanzania High Commission 23 Baines Avenue Harare Tel: 792726	
50.	**ZIMBABWE**	Toriro Percy	Acting President, Zimbabwe Intsitute of Regional and Urban Planners	City of Harare PO Box 1583 Harare Tel: 091331891 Email: pmunya@justice.com	
51.	**ZIMBABWE**	Zimudzi Farayi	Assistant FAO Representative	FAO	Box 3730 Harare Tel: 253693 Email: farayi.zimudzi@fao.org
52.	**ZIMBABWE**	Chewura Makiwa Wilfas	Photographer	Shop 2, 51 Speke Avenue	Tel: 023890755
53.	**MDP**	Matovu George	Regional Director	Municipal Development Partnership	7th Floor, Hurudza House, 14-16 Nelson Mandela Way, Harare Tel: (263-4-774385/6) Fax: (263-4- 774387) Email: gmatovu@mdpesa.org
54.	**MDP**	Mubvami Takawira	Scientific Project Coordinator	Municipal Development Partnership	Tel: (263-4-774385/6) Fax: (263-4- 774387) Email: peua@mdpesa.org
55.	**MDP**	Mushamba	Senior Program	Municipal Development	P.O. Box A1808,

		Shingirayi	Officer	Partnership	Avondale, Harare Tel: (263-4-774385/6) Fax: (263-4- 774387) Email: smushamba@mdpesa.org
56.	**MDP**	Chikuni Joyce	Programme Accountant	Municipal Development Partnership	Email: jchikuni@mdpesa.org
57.	**MDP**	Mukunyadze Tendai	Programmes Secretary	Municipal Development Partnership	Email: tendai@mdpesa.org
58.	**MDP**	Bwanya Norah	Bookkeeper	Municipal Development Partnership	Email: nbwanya@mdpesa.org
59.	**MDP**	Mumvuma Takawira	Policy Research Coordinator	Municipal Development Partnership	Email: tmumvuma@mdpesa.org
60.	**MDP**	Wamwangi Kinuthia	Training and Human Resource Development	Municipal Development Partnership	Email: kinuthia@mdpesa.org
61.	**MEDIA**	Chisipo Jabulani	Journalist	The Star	P.O. Box 138, Chinhoyi Tel: 067-21656 Email: jabulanichi@yahoo.com
62.	**MEDIA**	Dururu Norman	Reporter	ZIANA	News Agency 19 Selous Avenue/ 3rd Street, Harare, P.O. Box CY 511 Tel: (263-4-700047/706680) Email: newsroom@ziana.co.zw
63.	**MEDIA**	Hwekwete Rejoice	Reporter	Media Africa Group	Business Tribune

					17th Floor, Livingstone House, Harare Tel: (263-4-798401-3) Email: rhwekwete@yahoo.co.uk
64.	**MEDIA**	Padera Michael	Municipal Reporter	The Herald	Editorial George Silundika Harare Tel: 023813767 Email: Michael.paradza@zimpapers.co.zw
65.	**MEDIA**	Paganga Lawrence	Reporter	Daily News	Editorial Box 1040, Harare Tel: (263-4-752703) Email: lpaganga@dailynews.co.zw
66.	**MEDIA**	Sithole Simon	Photographer	The Herald	Zimpapers Box 396, Harare Tel: (264-4-795771)
67.	**MEDIA**	Tashaya Clemence	Correspondent	The Herald	Editorial Box 396, Harare Tel: (263-4-795771)
68.	**MEDIA**	Mosti Tendayi	Journalist	The Herald	Newsroom Box 396 Causeway Tel: 795771
69.	**MEDIA**	Chimunhu John	Journalist	VOA News	