



BULAWAYO URBAN AGRICULTURE

POLICY NARRATIVE

2007



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1.0. INTRODUCTION

This documents discusses key issues for a UA policy for the City of Bulawayo. These issues were distilled from the baseline surveys undertaken in the city and discussed at a feedback workshop. Stakeholders agreed that issues of accessing land, water, finance, gender and the marketing and organization of farmers are major issues to be considered when re-drafting the UA policy for the city.

1.1. Background

Agriculture in Zimbabwe is the backbone of economy and food security for the majority of the populace. The implementation of urban agriculture (UA) in Bulawayo is envisaged to alleviate poverty and provide food security for the Bulawayo urban community.

Improving the nutritional status of people is crucial in the context of HIV as it strengthens the immune system and can delay the progression of the disease and makes it possible for the individuals to remain productive. The challenge for the Bulawayo city council is to support UA in order to enhance food security, maintain good nutrition, good health through the provision of safe water and sanitation and UA related challenges. The baseline survey conducted in the city in 2005 and 2006 highlighted a number of issues that a policy on urban agriculture for the city has to address. Some of these issues include availability and accessibility of land for the activity, water availability, financial UA, organizing farmers and gender integration.

The vision for UA has been realized for a long time while Bulawayo and other cities have been practicing UA in an informal manner due to prohibitive urban policies and legislations. This vision prompted the establishment of a city council interdepartmental committee to examine the possibility of UA in the city and formulate proposals and policy guidelines for its development.

UA is not a new invention. UA activities, mainly vegetable gardens, staple foods and poultry projects are found throughout developed and developing countries. Various studies on UA in countries such as Ghana, Kenya, South Africa, Tanzania and Zambia have shown that UA urban households of different social class cultivated food in their backyards, front yards or in the urban periphery. The studies also revealed that 56% who practiced UA in Kenya were women. Generally in Africa UA is officially recognized as an important input to the economy and for food security.

1.2. Benefits of UA

UA is viewed as both a vehicle for empowerment for self-reliance and as an income generator. UA in developing and developed countries provides meaningful contributions towards:

- Household food security which ensures availability, accessibility and affordability of unprocessed foods that enhance improved nutrition and in turn contributes towards the fight against HIV/AIDS pandemic
- Self-production and self-reliance among the vulnerable groups
- Income generation of surplus products which can be sold for cash needed for education, health, clothing etc
- Source of foreign currency generation for exported crops
- Therapeutic treatment
- Environmental restoration and greening of the city

- Safer living environments and improved environmental awareness
- Promote reversal of urban migration

Urban agriculture in Bulawayo is a very important economic activity that affects the lives of many people. Those engaged in it realize commercial benefits, or practise it for subsistence to supplement their meager incomes or simply for survival. Great amounts of food are produced in the various sub sectors of this activity as detailed above, but its actual contribution to the food provision and food security needs to be investigated further.

For many families cultivated vegetables and crops within the residential properties and outside, provide the much-needed source of nutrition. Almost every home in the high-density suburbs has a thriving crop of traditional choumoulier vegetable that forms an important part of every day relish and its significance in providing cheap nutrition to the family must not be underestimated. Self-grown sweet potatoes, melons and pumpkins as well as other crops contribute to a family's balanced diet and health. Woodlots in urban areas provide firewood and timber.

One of the greatest attributes of urban agriculture is its potential as a resource for urban poverty alleviation. Crops and livestock produced in this sector can generate incomes for the poor citizens and improve their standard of living, but there is need to rationalize the activity and make it more viable. At the moment urban agriculture provides informal employment for the housewives, the youth and unemployed in the unauthorized areas and formal employment in the smallholdings and special consent areas. There is great scope for enhancement of employment opportunities once the sector is fully recognized and assisted to develop further. In-fact urban agriculture can be considered to provide one of the best potentials, for employment creation under the present economic circumstances.

A well-organized urban agriculture sector, that is productive and viable has great potential for spin off activities such as agro industries and established wholesale markets.

The other benefit of urban agriculture is “greening” the city. Growing of trees, both ornamental and fruit, and general crops and vegetables enhances the aesthetic appearance of the environment. Especially in winter when natural growth of vegetation is reduced, irrigated crops provide the needed green which act as lungs of the city in cleaning up the polluted air.

The city has vast areas of vacant land that is not yet developed and has been set aside as public open spaces or servitudes for electricity, railway lines, telephone lines and roads. This land is easily accessible for urban agriculture and offers an opportunity for the planning for urban agriculture. Wastewater is used in the garden allotments, community parks, council farms, gum tree plantation, (urban agriculture pilot project) institutions and so forth. However, there is still great potential for exploitation of this important water source for urban agriculture by up-grading recycling of wastewater at the Southern Areas Treatment Works, Cowdray Park Ponds and Water Treatment Works.

Advantage should be taken of well-organized community structures such as residents associations, burial societies, co-operatives women and youth groups amongst others to promote urban agriculture in the city. There is also expertise that can be tapped from agricultural training institutions in and around the city as well as government departments dealing in agriculture. NGOs such as World Vision and ORAP are also interested and active in supporting urban agriculture in the city.

Market opportunities for urban agriculture are abundant in the city, citing the large fruit and vegetable wholesalers in the Central Business District, the GMB, milling companies and institutions such as hospitals and boarding schools. In so far as inputs are concerned, urban agriculture benefits from the existing suppliers in the city such as Impala Seeds, Farm and City Center and GMB which retail seed, fertilizer, pesticides, veterinary medicines as well as farming tools and implements.

The sections below discuss the critical issues which a policy on UA for the city has to address.

1.3. Situation Analysis

Urban agriculture in the city is undertaken in various forms and these are briefly described below.

a) Designated /Zoned Areas

Residential/Agricultural Areas in plots mostly over 2 ha in extent are designated through the master and the local plans. These plots are largely in peri-urban areas of Douglasdale, Montgomery, Umguza Agricultural Lots and so forth. Also included here are low-density residential areas such as Burnside, Lochview, Trenance, Riverside and Richmond. Cropping is mostly dependent on rainwater as well as boreholes as this is a low rainfall area and to a lesser extent on irrigation. Shortage of water is one of the major problems.

Produce include crops such as maize, vegetables, fruit, feeder crops; poultry, piggery, goats, sheep, dairy cows. The produce is marketed in the city especially at the wholesale markets which are in the central business district.

b) Special Consent Areas

Urban agriculture is also practiced in areas that require special consent. These are areas generally designated for other uses. However, urban agriculture is permitted in such areas after the municipality has granted consent. Such areas are in the low-density residential areas where poultry and market gardening are largely practiced. Permits to practice urban agriculture are granted by the Council with Special Conditions. Size of the plot, health and environmental conditions are normally the major considerations in granting these permits. Under normal conditions, residents are allowed to keep 25 chickens on their plots without the need for a permit. Numbers above 25 require the consent of council and neighbours. The council is supposed to follow up and monitor whether those granted the special consent are abiding by the conditions of their permits. However, due to various reasons, there has not been any monitoring.

c) Council Farms

Council has two productive farms within its boundaries namely Aisleby and Good Hope.

Aisleby Farm covers an area of 1286 hectares and lies to the north of the city where Aisleby sewerage Works are situated. The treated effluent from the works is used for irrigating the farm pastures, which are divided into a number of paddocks. A successful livestock production project is run by Ingwebu Breweries, which is a commercial wing of the City Council. For example in 2004 the year opened with 1 996 cattle. At the end of December there were 1 813 beef cattle, with 320 births during the year, 84 deaths and 509 cattle sold that year. Causes of the high mortality are thought to be the high contact of metallic chemicals from industry which discharge into the municipal sewers feeding the works. There is also an experimental sheep project which started in 2004 with 20 sheep.

Goodhope Farm is adjacent to Aisleby. In 2004 it had 86 hectares of maize which yielded 257 tones or 3 tones per ha. 91 hectares of wheat were planted and yielded 328 .4 tones or 3.6 tones per ha. These yields were considered low and attributed to imbalances in nutrients as a result of shortages of farming inputs. Some Council Farms are leased out for grazing for example Remainder of Umganin.

d) Garden Allotments

Over many years the City Council has set aside areas for garden allotments in the high-density low income areas. These have been established in selected areas especially areas with relatively fertile soils on vleis and along rivers courses. There are 12 garden allotments scattered throughout these low cost residential areas and examples are West Park near Mzilikazi and Makokoba, St. Columbus in Makokoba, Mabutweni, Mpopoma and Njube.

These garden allotments were created particularly for the underprivileged groups such as the elderly, destitute, the poorest and widows. Beneficiaries were selected by case study social workers in the department of Housing and Community Services and the major objective of this urban agriculture programme is to alleviate urban poverty and improve the nutritional state of the poor. At present there are over 1 000 plot-holders and the size of each plot averages 130m². The size of each garden allotment area ranges from 0.42 to 4 hectares.

Crops grown are mainly vegetables and the most common is chomoulier and farmers say they prefer it because it is perennial, grows quickly and even when stolen by thieves, regeneration is fast and there is a ready market for it. The popular variety is grown from shoots and does not need seed. However, the quality of the crops and productivity everywhere appears poor mainly because of continued use of soil without use of the fertilizer or manure. Council previously used to provide technical assistance to those farmers through extension officers but this has declined due to financial problems. Most of the garden allotments use reclaimed wastewater from the sewerage works although this is erratic during times of water shortage in the city.

e) Gum Plantation

This is an urban agriculture project initiated and supported by the City Council. It is located north west of the city and measures 350 acres in extent. There are 1100 plots of 5000m² each the project uses waste water from Cowdray Park Sewage Ponds, Magwegwe Sewage Works and Luveve – 4 500 to 5000 cubic metres per day are used by individual plot holders and 4 co-operatives (5ha). Allocation of plots is done per ward by councilors. Productivity is reasonably high, much better than in the garden allotments. Crops grown are mainly chomolier, 40 kg per month per plot holder, green mealies, ±5000 cobs per year per plot holder is produced and with regards to sugar beans 25kg per plot is realized on average. There is a potential agro-forestry that is bee keeping.

f) Khami School Leavers and Co-operatives

Khami School Leavers Training Center is located near the Southern Areas Treatment Works (SAST). This is also an initiative of the Bulawayo City Council for training youth and co-operatives. The center offers general agriculture training, practice and theory in both livestock and agronomy. In the livestock section there are 25 beef cattle, 2 to 3 of which are sold annually and another 2 slaughtered annually. A piggery project is planned. So far 15 ha are being utilized in this location.

g) Unauthorised Urban Agricultural Activity

This is the most prevalent form of urban agriculture in the city although it is seasonal occurring mostly during the rainy season. Maize is the predominant crop although other crops like sweet potatoes, melons, pumpkins, beans are also grown. Cultivation takes place almost everywhere and during the rainy season maize fields become so much part of the city's landscape that it is often even unnoticed as one moves around the city. It is done around the house, in open spaces, along road sides, or vleis, water courses and stream banks, on hill slopes, on old rubbish dumps, along servitudes for electricity, water wand sewers. A lot of urban farming is carried out on land that was planned, surveyed and even serviced, awaiting development in some cases.

The majority of these farmers belong to the low-income groups who grow crops on a part time basis for subsistence and improving food security and income levels. Usually the whole family is involved in maize cultivation although women appear to take a leading part. The size of the maize fields ranges from small patches measuring a few square metres to a number of hectares. According to these sizes the methods of cultivation also differ with smallest farmers using hoes whilst others use donkey drawn ploughs or hired tractors. During the farming season, villagers in the surrounding rural areas like Matopo come into Bulawayo with their donkeys and ploughs to hire them out to the urban farmers.

There are no records on the fields and overall production of these unauthorized cultivations. But it is thought that the amount of staple food produced is substantial and there is need for research in this area. Inputs such as seed and fertilizer are readily available in the city's outlets but issues of affordability, proper application and returns remain of great interest to research.

Main issues relating to UA in the city include accessing land for the activity, water, finance, organizing the farmers, markets for the surplus produce and issues of security of the produce.

2.0. Land Issues in UA Policy Formulation

Urban agriculture has not been included in the traditional land uses, hence no provision for it was made. Urban agriculture has been considered as insignificant and met with hostility hence it has not been fully integrated into Master, Local and Layout Plans. These plans are blue prints that guide the city's future and present development plans. However, urban agriculture has the potential to help alleviate poverty and ensure sustainable livelihoods if fully integrated into all local authority plans. With that in mind it is thus important to integrate urban agriculture in all plans, from Master Plans down to Residential Layout Plans. Integration will facilitate and enhance agricultural production in the city. As a first step the city of Bulawayo undertook a study of all the areas on which the various forms of urban agriculture are undertaken. Most of the urban agriculture is unplanned and is not environmental friendly as people till any open space in close proximity. The New Master Plan has already recognized urban agriculture as a land use, and Local No 10 also makes provision for agriculture.

It is at the Layout preparation stage that the exact urban agriculture sites need to be designated. The city also has a vibrant urban agriculture practice on the ground. This includes:

- Welfare gardens at Makokoba. Mabutweni. Njube/Lobengula, Greenspan, Luveve, Nketa 6, and Renkini. The year 2006 also saw the establishment of new sites through the assistance of a donor agency. These sites are located at functional municipal boreholes.
- Irrigation schemes are at Luveve/Cowdray Park (Gumtree Plantation), Khami (SAST)/Dunstan farm and Aisleby Farm. The land adjacent the effluent disposal sites utilizes wastewater for irrigation purposes.
- Livestock rearing; this includes on municipal farms, private plots and the semi rural Hyde Park area.
- Poultry: These are mostly concentrated on private plots in the low-density areas.
- Seasonal maize cultivation. This is the most wide spread form of UA and is controlled by the availability of rainwater. It is practiced on any available open space.
- There are a number of sites that have potential for large-scale urban agriculture. These include Norwood Tracks, Hyde Park Re Umganin. former Magwegwe Ponds, Khami River, Hyde Park Plantation. Portion of Reigate. Farms around Inyakuni and Ncema Dams.
- There are also many large, privately owned, plots (+4000m²) in the low-density areas, which are under utilized. Whilst the practice of UA cannot be compulsory, landowners can be educated to fully utilize their land.

Challenges

The keynote for the revised policy should be that; urban agriculture is to be recognized as a legitimate urban land use. For this to be achieved it should be included in statutory instruments, policy documents, planning documents and land use

plans. A number of issues were identified as being key to the successful adoption of UA as a legitimate land use in Bulawayo.

2.1. Issues

- a) Ownership of Land - not known who owns land on which UA takes place and in what quantities i.e. how much is municipal, government and privately owned.
1. Security of tenure issues should be addressed
 2. Inventory of land should be conducted to assess how much land is available
 3. Surveys, demarcation, mapping and drafting of lease agreements should be done

The land available for UA in the city can be divided into three categories:

- i) Council owned: open spaces, vacant stand, undeveloped layouts, municipal farms,
 - ii) Private owned: on plot opportunities, which need support in terms of resources.
 - iii) Government owned: e.g. undeveloped school sites mostly in low-density areas, servitudes
- b) Access to land - procedures for accessing land for UA should be clear
- Gender issues should be considered in accessing land. e.g. Botswana has a fifty-fifty policy. Policy should make provision for vulnerable people (youths, widows, elderly).
 - Policy should be clear on selection criteria of beneficiaries (transparency).
 - Policy should address the issue of responsibility at all levels.
- c) The current system for applying and allocation is not uniform some are given free leases some are charged rentals. Case in point is the World Vision boreholes/vegetable gardens versus applications by individuals for similar utilization of existing boreholes. At the moment there is no clear procedure such as going through Councilors to access land (and is this desirable in the first instance) or applying to Council departments. If leases are introduced then one department should handle them. (One stop shop for UA).
- d) Provision of Infrastructure necessary for successful UA
- Boreholes
 - Waste water usage
 - Water harvesting
 - Roads
 - Mini processing plants
 - Sanitation Marketing
- e) Administration - the policy should be clear on institutional set-up and responsibilities - creation of a U A office or department.
- f) Guidelines on Land Usage should be developed.

2.2. Policy guidelines

These mostly refer to the use of the land and the location of UA sites:

- Cultivation on municipal land to be legalized through a tenure system.
- Cultivation on planned open space/park belts should be prohibited or restricted to floriculture
- Issues on stream bank cultivation should take into account other existing laws e.g. the 30metres buffer. Anything less than 30m need special consideration e.g. growing of herbal trees/plants, pasture cultivation and fruit trees. Minimum land tillage has to be practiced. (Zero tillage technical)
- Roadside cultivation to be restricted to dwarf plants and runners e.g. legumes and potatoes (all types of potatoes). Knee length and above need to be avoided at all costs.
- Plot sizes and usage of the plots determine what type of project cropping and horticulture, green houses, small animals e.g. birds and fisheries.
- Environmental management measures should be included in the policy to guide UA e.g. no to indiscriminate cutting down of trees and other valuable plants and this can cause degradation and deforestation.
- Topography conservation management and restriction of big animals e.g. cattle on plots and peri urban areas. Tillage done only between 0-8% slope and 5 to 8% slope need close monitoring by conservationists.
- Suitability or unsuitability- different environments and soil types determine the crop to be grown and at a lesser extent animals to be kept, some animals respond to a certain type of feeds (foliage and grass) and others are non selective.
- Nutrition- crops of different types require different organic and inorganic fertilizers (kraal manure, compost and green manure) depending on the soil type fertilizers need to be used cautiously.
- There is also the question of livestock rearing e.g. can grazing zones be created as well as sales pens. (Especially goats as they are popular in the city).
- With regard to poultry, are the numbers permitted under health regulations realistic when considering techniques used for broiler production and layers? There is also a general disregard for the regulations throughout the city.
- Infrastructure necessary for successful UA practice should be provided by the city in partnership with the donor community, the private sector and the farmers. A key element is accessibility to water. The land may be available but if there is no water crop production is restricted. Most of the land being used for crop cultivation does not have access to water and hence seasonal cropping is practiced.

3.0. WATER ISSUES

Water has become increasingly scarce and costly to meet the City's water demands by various sectors. Bulawayo is a water scarce and drought prone area and has limited surface water resources as well as unreliable rainfall. The City's main challenge is to be more innovative in making use of modern techniques such as improved animal husbandry and irrigation including use of recycled water, to raise productivity in urban agriculture sector and maximize returns to investments. In order to improve food security and create more income earning opportunities in urban agriculture a UA policy for the city needs to reinforce the perception that treated waste water is a resource and not a waste product so as to promote its re-use in UA at all levels.

Like any form of life, urban agriculture is dependent on water i.e. a water supply of the right quantity and quality is indispensable for plant production or animal husbandry. Bulawayo is a water scarce area, unless all the planned projects have been implemented for water supply e.g Mtshabezi pipeline, Gwayi Shangani pipeline and the Nyamandlovu Aquifer. Presently what is available is not enough for the present water supply demand, that is why urban agriculture is not successful.

3.1. Existing Sources of Water

Existing sources of water found in Bulawayo are dams, boreholes, and treated wastewater. Only 265 boreholes out of a target of 450 were drilled, this was due to lack of adequate funds to support the programme.

3.2. Water Harvesting

Access to supplies of water is critical to the successful implementation of urban agriculture in Bulawayo. For the City to address food security and nutrition there should be adequate supplies of water for urban agriculture. Water harvesting techniques can be very important for urban agriculture given the low rainfall pattern experienced in Bulawayo, Other sources and water harvesting techniques need to be established and implemented to cater for urban agriculture.

The options are as follows:

- Rainwater harvesting from the rooftops
- Sand abstraction from the peri-urban rivers
- Boreholes (underground water)
- Grey water from the sinks, baths etc should be separated from the main sewer lines.
- Reclaimed water from the main sewer systems need to be utilized for urban agriculture.
- Dams can also be used as water catchment points for urban agriculture. However, the poor rainfall pattern is prohibitive for the current dams to have enough water that can sustain both urban agriculture and domestic use.
- Boreholes can also be used for urban agriculture but due to the scarcity of water in the city, they can only be reserved for domestic use.

The most viable source of water for urban agriculture in Bulawayo may be reclaimed wastewater. It is clear that wastewater effluent from domestic sources can sustain urban agriculture in the City. Currently wastewater from Thorngroove and Luveve is used to irrigate small-scale gardens and fields at schools and parks while some of it is pumped back into sewer ponds.

However, the local authority is likely to meet resistance from city residents on the use of treated waster in urban agriculture. This perception can only fade away if the Council creates public awareness on the use of treated effluent for urban agriculture by multi-stakeholders forums.

3.4. Water Quality (reclaimed water)

Re-use of treated wastewater can only be permitted provided it adheres to the specific application of wastewater and the methods used to distribute the water. Water quality section under the Environmental Management Act (EMA) has standards for the discharge into the environment of wastewater. The quality of the effluent water is a

critical factor in agriculture because of its influence in crop selection, public health aspects and re-uses i.e. application in crops due to risks of risks of crop contamination, exposure of farm workers and consumers of the crop. However, this will depend on types of UA practiced. Treated effluent if properly administered is a valuable resource that can yield positive results because of high nutrients in the wastewater thereby reducing the need of artificial fertilizer.

3.5. Water Distribution

There is need to look at water saving technologies for urban agriculture such as drip irrigation systems, water recycling methods and other water conservation approaches. The UA policy should regulate the use of both raw and effluent water for urban agriculture. If tariffs are to be charged, they should not be prohibitive for both farmers and aspiring farmers to venture into this activity. In the event of good rainfalls to fill up all the dams, separate pipelines should be erected to draw raw water for urban agriculture. The UA farming areas have to be served by the nearest cost-effective sources of water depending on the geographic location. Stringent water resources management on the farmers and some regulations on permit application on water user committees should also be put in place.

4.0. FINANCIAL ISSUES FOR UA POLICY

The inherent benefits in engaging in agriculture have led the City of Bulawayo to refocus on urban agriculture in an effort to unlock all the wealth that goes with it. The City has therefore set a budget in 2007 to assist in this regard. However, the City alone is not capable of adequately funding urban agriculture and hence there is need for all stakeholders to participate by providing donations, loans, grants or partnering the City or the intended farmers.

As a start, the City of Bulawayo should show commitment to UA by including it in its annual budgets. The city can then source additional funding from partners, donors, government, financial institutions etc to augment its own resources for urban agriculture. It is also important to consider some incentives for those who fund UA projects in the city. These may be in the form of tax concessions and paying reduced rates. Such incentives will result in other stakeholders coming on board to fund UA activities. The policy should also consider levying some charges for lease agreements for UA activities and funds raised should be used to better provide services to the urban farmers.

5.0. Diversification of UA Activities

Monoculture is practiced in most of the UA areas in the city. People prefer leafy vegetables to other crops because of the short time it takes to grow these and for security reasons. Leafy vegetables regenerate and even after thieves have struck, one can recover within a short period as the vegetable leaves grow back within a short period of time. This is unlike other types of crops like carrots, lettuce and beans which are lost once thieves attack. The impact of this on the soil is very negative. The same types of nutrients are siphoned from the soil by the plants. There is need to introduce other varieties of crops and herbs. Evidence of soil salinisation was also noted in some of the areas used for UA.

5.1. Opportunities

Several opportunities exist for diversifying UA activities and improving the quality of the soil in Bulawayo. These include introducing new forms of UA and the introduction of organic farming and other related programmes. The list below gives an example of some of the activities that can be started.

- Bee keeping
- Herbal gardens
- Agro-forestry
- Urban forestry
- Waste recycling projects
- Composting and use of animal manure

The UA policy should address some of these new opportunities.

6.0. Policy and Legal Issues

The concept of Urban Agriculture is not entirely unknown in our legal system. The only difference is the terminology that has been used in the past and the difference with current terminology. The concept has also gained acceptance and recognition over the years and has thus attracted a lot of attention. The attention it has created has therefore called upon different stakeholders to look at UA from a different perspective. From a legal point of view, there has been need to look at the various legal provisions and their relationship to UA. There have also been calls to ensure that the law is revisited to ensure that its spirit unambiguously provides for issues related to UA.

In the case of UA in Bulawayo, there are a number of policy and legal issues that have been identified as impacting UA. Some of the issues are clear but there is need for further elaboration in the legal instruments that impact on UA so as to establish any contradictions between legal and policy provisions and the activities that are taking place on the ground. The main one is the Bulawayo (Protection of Lands and Natural Resources) By-Laws of 1975. These by-laws regulate how residents in the urban or peri-urban area may practice urban agriculture.

In any civilized society, people live by rules and regulations so that life can be orderly and as stress free as possible. In that regard, residents intending to practice agriculture in the urban area of Bulawayo are required to get permission from council first if they want to:

- keep bees
- go into livestock production
- poultry keeping

Council will then consider these applications and if the land is suitable or the applicant complies with certain requirements, permission will then be granted. Where poultry is concerned, a household may keep 20 chickens without applying for permission, but since poultry producers sell chicks in batches of 25 and it is recommended that the number be increased to 25. These activities are regulated by the Bulawayo (Public Health) By-Laws SI 803/66.

For the land cultivators, no one may cultivate municipal land without prior approval. So if agriculture which goes beyond one's plot, it usually takes place on land owned by other people or institutions. This type is regulated by the Protection of lands and

natural resources by-laws. Under these by-laws, residents are not allowed to cultivate within 30metres of the verges of any spring, marsh, swamp or banks of a public stream or any body of artificially conserved water.

These regulations need to be kept up to date as with new scientific methods of cultivation are being developed, one may find that the regulations will be outdated. Recent scientific research has shown that not all stream bank cultivation causes soil erosion, bur certain crops can actually be grown and help to arrest soil degradation, e.g. planting bananas on stream banks.

Another piece of legislation that has a bearing on urban agriculture is the Environmental Management Act. The purpose of this Act is to provide for the sustainable management of natural resources and protection of the environment amongst other things. Since the activities of urban agriculture have a bearing on natural resources and the environment, it is necessary that those who practice it take into account that natural resources and the environment should be protected and not polluted by their activities. It is necessary that people practicing urban agriculture are taught farming methods that do not harm the environment and natural resources.

6.1. Relevance of provisions

There is no systematic way of revising/ amending existing laws/by laws relating to UA in the city. Some of the regulations have been in place for over years without any revision and are therefore no longer in tandem with what is happening on the ground/ scientific research. An example is the 1975 Natural Resources (stream bank Protection) regulations. Whilst the regulations specifically/ outrightly prohibit cultivation within 30 metres of stream bank, regardless of the crop grown, scientific research has shown that not all crops can cause soil erosion if planted in the stream bank. If anything there are certain crops that can actually abate soil erosion if planted in the stream bank. However legally these crops can still not been grown on the stream banks because the regulations say otherwise. It will therefore be necessary to ensure constant periodic review of the bylaws so that new developments are incorporated.

7.0. FARMER ORGANIZATION

Urban farmers in the city of Bulawayo have failed to take advantage of some of the programmes being implemented due to lack coherent organization amongst themselves. There is no clear clear structure representing the various groups of UA farmers in the city. A number of association some registered other not registered, individual traders, informal groups neighbourhood households, traders from as far a field as Honde Valley and Mutare, Hwange plus a coterie of vendors and hawkers all constitute agricultural produce marketing. In an effort to understand at market systems logic the research soon realized that because of the proliferation of marketing macro approach would present a better picture.

The Zimbabwean Commercial Farmers Union is a large group that includes both commercial and small-scale urban farmers. It has an oversight into urban agriculture production and marketing. Major programmes and activities initiated by this group centre on safeguarding the interest and concerns of the rank and file of the membership in various ways. The ZCFU has the audience of Government therefore it is a strong voice for farmers associations. Recruitment is voluntary. There is

individual membership and association membership. The joining fee is currently ZW\$15000 (fifteen thousand Zimbabwe dollars) while individual membership is an option the ZCFU encourages the community to form collective organizations such as farmers association in their areas of residents. The ZCFU scrutinizes the constitution of the farmers association both for legality and compliances with national objectives. However, the ZCFU is not involved in the day-to-day operations of farmers associations. They operate semi-autonomously and seek guidance from the ZCFU as and when necessary. The farmers associations have their own constitution, which regulates their activities. The associations form small committees specializing in an area of urban agriculture. There is a marketing officer both whose main responsibility is to assess the market situation and pricing. Where farmers associations face a particular challenge like the slow movement of a particular commodity they contact the ZCFU for possible redirection of that particular produce. The ZCFU also does the same. If faced with bulk orders for chicken it activates its database to identify those associations which may be in possession of a surplus to satisfy the market demand. In this way the ZCFU in Bulawayo Province supports its affiliate farmers association to market their agricultural products and it assists in trying to get a fair price especially where there is a sudden high demand for products like pork, poultry. Certainly producer associations have the capacity to perform concrete activities. Producer organizations once registered have a legal status (*locus standi*) and oversee the activities of farmers association. Producer organizations have a convincing institutional profile as they can process bank loan applications on behalf of farmers associations. Producer organizations actually act as guarantors in such circumstances. The major weakness is that some farmers associations are potential members only. There is no hurry on their part to join an established organizations like ZCFU. Individual membership also fragments the farmers union unnecessarily. The main strength of the farmers union is its ability to expand its membership base with little effort. The joining fee is however quite high but the benefits accruing in the long term outweighs this.

The other aspects to consider are those factors that tend to militate against effective functioning and performances of producer organizations. The umbrella union itself has managed to create cells at grassroots level and farmers associations exist at every province and district. However, due to the fact the membership of farmers associations is optional the producer organizations are not as strong as they would like to be. Membership attendance at meetings is at times as low as 25 out of an expected 60.

When training opportunities become available everyone should consider themselves eligible from such training. The Kellogg Foundation ran a series of course on Leadership but those benefited were mainly the general membership of ZCFU. It is, however, note worthy to mention that there are specially designed courses to promote capacity building and grassroots leadership development environment and conservation management. This facilitates the association's activities and creates awareness of the customer's needs in the supply chain. There is a symbiotic relationship with a lot of potential associations but this requires strengthening. Leadership capacity development and effective functioning of all structures can partly achieve this. A system of performance monitoring would be and added advantage.

One method of achieving this objective is to ensure that the operations of farmers associations are strategic and systematic capable of interrogation and self-monitoring as depicted in the illustration adapted from Johnson and Scholes (2002) on planning for marketing. This is also facilitates SWOT analysis and remedial adjustment.

Currently, producer organizations face real challenges. Focus groups highlight problems of access to finance for farming purposes. Where loans are available interest rates in an inflationary economic environment are high. AGRIBANK loan and interest are affordable but the problem is that farmers associations do not all hold title deeds for the pieces of land they utilize. Another problem is lack of agricultural machinery and tools, lack of regular reply water supplies is mentioned as a third challenge. Lack of management particularly financial management skills is another obstacle. Marketing of perishable products and some farm products poses a veritable challenge. The researcher also observed that the haphazard operations of hawkers and vendors distort the role of registered producer organizations. Producer organizations need to present a united front to regulate inflows of farm produce in order to knock down arbitrary pricing which is currently the norm.

When all is said and done it is worthwhile to observe that producer organization have a clear vision on their role in urban agriculture. It is envisaged that once urban farming practice gets better organized and gathers momentum agricultural products will be delivered straight to suburbs such as Magwegwe, Pumula, Luveve, Emganwini to cut down traveling costs and transport hustles faced currently by buyers and sellers. A big market will be centrally located in every residential area. The removal of transport costs will also reduce the purchase price of farm produce. Another innovative strategy being considered from future auctioning is to deal with invasion of the Bulawayo markets by traders from faraway who fix their own price and push up the costs of living only certain commodities. The commodity units determine the purchase price and manner of disposal of excess farm produce. At the moment the ZCFU stands by almost helplessly. The foreign trader will be shut out by a pricing mechanism. He will either seller his farm produce at a lower price or cut it away elsewhere. Definitely, the farmers union has to capacity to achieve this objective as long as there is a clear urban agriculture policy.

At the moment other than custom and conventional practice, there is no policy guideline. Consequently, even for a project like mushroom growing at Lobengula Street and Second Avenue, institutes such as SIRDC give direct assistance to the enterprise in the form of mushroom seeds for use during training and for mushroom production. Established commercial enterprises also make their own individual arrangement with food crop and vegetable producers outside the framework of the producers association. These activities need to be harmonized and regularized. It also requires facilities to identify real and potential markets for various agricultural products. This can enhance income and revenue generation.

The policy therefore needs to address various issues relating to the creation and capacity building of farmer organization.

7.1. Opportunities for Working with the farmers to improve marketing

Several opportunities exist for working with UA farmers in the field of marketing. These include:

- Organizing the farmer groups into cohesive units to enable them to lobby and access various services.
- Facilitating access to market information so that they produce for the markets and meet the quality and quantity requirements of the markets.
- Improving Extension services to improve production techniques and improved production in terms of quality and quantity.
- Improving farmers' access to credit.
- Training farmers to improve production practices and therefore enhance the quality of the produce.
- Organizing farmers to access inputs in groups and to take advantage of economies of scale.
- Facilitating access to processing equipment and ensuring value addition in the process, e.g. for drying the green vegetables and tomatoes.
- Promoting organic farming and identify appropriate overseas markets for the produce

7.2. Challenges to the Marketing potential

The recent clean-up operation broke-up the established marketing channel. The future of vendors is very unclear. This has removed a very important market link for the urban farmers. It is also not very clear how far the operation will affect agricultural production in Bulawayo. There is general uncertainty that might affect the farmers' motivation to invest time and resources towards increasing production.

The farmers have no access to credit facilities and they find it hard to mobilize more resources to increase the level of production and improve the quality of the produce. Some of the farmers in the peri-urban areas have borehole facilities that have broken down due to poor maintenance and would need to access finance to rehabilitate the facilities. Most of the producers are in their old age and most lending institutions grade them as a high-risk group making it hard for them to access the credit facilities.

The poor farmer organization also affects their ability to mobilize resources for the processing and value addition to their produce.

7.3. Training/information needs for urban farmers:

The following issues pertaining to training were identified by the urban farmers through focus group discussions:

- Formation and management of farmer groups/associations/cooperatives (leadership and organizational skills).
- Agri-business skills.
- Farm management, records management and financial management.
- Marketing strategies and opportunities.
- Crop and animal varieties (nutritious foods for home use, high-value/high-yielding crops/animals for sale).
- Food storage, processing and packaging,
- Appropriate farming systems and technologies.
- Water and soil conservation techniques.
- Policy advocacy and lobbying.
- Health and environmental hazards associated with urban agriculture.

8.0. GENDER AND SOCIAL ASPECTS

Consideration of gender issues in the policy on UA is necessary because urban agriculture may impact on women and men in different ways. It is necessary when formulating a policy on urban agriculture to know who the main beneficiaries of the activity are and cater for their needs. Experience has shown that it is mostly women who are involved in urban agriculture. Of these women, some are elderly and others are widows, some are affected by HIV/AIDS and other diseases and are not in good health.

Thus, if old elderly women are allocated plots far away from their homes, they may not be able to access them easily. A water source which is far away from the fields may also impact negatively on these people. The terminally ill should also be catered for, as even though they themselves physically may not be able to do manual work, they may be in a position to employ others. It is well known and accepted that women have historically been disadvantaged. It is also well known that when any programme that appears to be popular comes up, men want to be at the forefront to the disadvantage of the already disadvantaged women. Measures therefore have to be put in place to ensure that women also benefit.

It is therefore necessary to have right from the start a policy which spells out the intended beneficiaries so that the deserving beneficiaries are not pushed aside by the better educated who have access to information and know how to go about obtaining land for urban agricultural practices. The youths should also be targeted for urban agriculture. This will be a way of removing them off the streets and getting them engaged in something productive and away from antisocial behaviour.

Socially, most people involved in urban agriculture, are the poor, and the disadvantaged. The trend has been for these people to practice urban agriculture on a mainly subsistence basis. Some do sell the produce but the gum plantation experience will show that not much is realized out of these sales. The people barely manage to make a living from urban agriculture.

Urban agriculture can also have a big social impact on those affected by HIV/AIDS. It will mean a better diet, and selling of will result in some income for medicines. Since Bulawayo, like any other town is living with HIV/AIDS, it will be a big step socially to have a policy with HIV/AIDS sufferers in mind.